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Perceived Communication Activities and Effectiveness
of Male and Female Elementary School Principals

by



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A THESIS

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ABSTRACT

This exploratory study was designed to compare two groups, male elementary school principals and female elementary school principals, on the basis of their communication activities and communication effectiveness.

Literature pertaining to women in administration, to perception, and to communication provided the conceptual framework for the study.

The sample consisted of 15 female and 29 male elementary school principals together with the teachers in the 44 principals' respective schools in British Columbia. The schools had four or more teachers in addition to the principal and any grade combination of K through 7.

All participants responded to questionnaires originally sent out in September, 1975. The questionnaires sought background information on the participants and sought participant opinions on 26 items. Half of the 26 questionnaire items were adapted from Knower and Wagner's Administrative Communication Rating Scale (Dugan, 1967:73-75) and the other half arose from a review of literature on communication.

The findings of the study included: 1) no significant difference in the communication effectiveness of male and female elementary school principals, as perceived and rated by teachers; 2) no significant difference in the communication effectiveness of male and female elementary school principals, as revealed by

the self-ascribed ratings of principals; 3) some significant differences in the ratings of teachers with principals (both male and female) rated as "more effective" communicators and the self-ascribed scores of those principals on evaluations of principal communication effectiveness; 4) some significant differences in the ratings of teachers with principals (both male and female) rated as "less effective" communicators and the self-ascribed scores of those principals on evaluations of principal communication effectiveness; 5) some significant differences in the communication activities of male and female principals, as perceived and rated by teachers; 6) some significant differences in the communication activities of male and female elementary school principals, as revealed by the self-ascribed ratings of principals; and 7) some significant differences between the teacher-assigned ratings and the principals' self-ascribed ratings regarding principal communication activities.

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Chapter I

Introduction

Background to the Problem

The 1960's and 1970's have been years in which many North American minority groups have become increasingly vocal, even militant, in their demands for "equal opportunity." Since women are a minority in Canada's labor force (Women's Bureau, 1975:3), they too have pointed accusing fingers at businesses and professions which employ few of their number. As a result, it was inevitable that the administrative structures of school systems would come under attack since, for example, women are far outnumbered by men in administrative positions, even though there are more female school teachers than male teachers (McDonough, 1967; Herson, 1972; Nixon and Hrynyk, 1973; and Young, 1975).

But why are there disproportionately fewer women than men holding administrative appointments? Barter (1959) blamed school systems which induce men to become elementary school teachers by suggesting that a promotion to principalship will be rapid; opportunities for advancement, Barter concluded, are thus weighted in favor of males. Burns (1964) and Timmons (1973), on the other hand, suggested that there is some justification for excluding women from administrative posts because women teachers, unlike their male counterparts, do not prepare themselves academically for advancement. However, Lyon and Saario (1973) maintained the position that women aren't prepared academically because they

are discriminated against by admissions personnel who select students for graduate studies in educational administration. Thus the charges are answered by counter-charges.

Some researchers have attempted to compare the actual performance of male and female principals in an effort to provide more reasonable grounds for hiring practices. Wiles and Grobman, for example, found "women rank significantly ahead of men as democratic principals" (1955:77); Hoyle found female administrators were perceived by teachers as noticing potential problem situations significantly more often than male principals (1969: 24). Such findings suggest women are competent administrators and, as such, should not be unfairly eliminated from consideration for administrative posts.

A critical area of administrative performance that was not specifically probed in the reviewed literature concerns communication. How well do female administrators communicate with their subordinates, as compared to male administrators?

The Problem

An exploration of the communication activities of male and female elementary school principals was the focal point of this study. More specifically, the problem was to compare the communication activities of male and female elementary school principals in British Columbia, as perceived and rated by the teachers in the respective schools. This study attempted to discover whether female principals were perceived by teachers as being, in general, more

or less effective as communicators than male principals.

Sub-Problems

Investigation of the general problem involved consideration of the following question: what communication activities do "more effective" and "less effective" communicators engage in, as perceived by teachers?

Also, because an individual's own self-concept may influence the manner in which he is perceived by others, it was important to know how each principal perceived his own communication activities. One could then assess the degree to which principals and their staffs agreed or disagreed regarding the principals' communication activities and general communication effectiveness.

Significance of the Problem

1. Importance of communication. The vital role communication plays in all aspects of society is itself a primary reason why a study of communication effectiveness is worthwhile. Pulley said "effective communication is essential for the maintenance of positive relations between human beings" (1975:50). On the other hand, ineffective communication can lead to misunderstandings between individuals, and hence, to negative relationships.

Effectiveness of communication, then, is vital, especially as "effectiveness" - or lack thereof - is perceived by the message receiver. If communication attempts are not perceived as being effective by the receiver, it is highly unlikely that there has

been, or that there could be, effective communication.

2. Importance of communication to administration. Administration of an organization can be conducted only through use of communication processes. Administrators spend virtually all of their time dealing with people, whether the purpose is negotiation, persuasion, information-seeking, or direction giving.

The effectiveness of administrative communication within an organization is, therefore, the best measure of the effectiveness of the administration. Poor communication, poor administration. Effective and efficient communication, effective and efficient administration (Thayer, 1961:3).

Consequently, the ability to communicate well is a necessary and valuable skill for administrators.

Not only is it necessary for the administrator to be able to communicate well, it is also important for him to perceive accurately how effective he is (or is not) as a communicator. If he overestimates his effectiveness, there is a danger that communication flow in his organization will break down or be seriously limited before he is aware of such problems. On the other hand, if he underestimates his effectiveness, he may do one of two things: a) he may inadvertently transmit his lack of self-confidence to others, thus causing others also to regard him as an ineffective communicator; or b) he may tend to overload the system with redundant messages, thus actually causing himself to become an ineffective communicator.

3. Importance of this study to administration. This study is concerned with actual job performance of male and female elementary school principals. Among possible outcomes, one of the following

three could occur: a) female elementary school principals would be perceived as being generally more effective communicators than their male counterparts, b) male principals would be perceived as being generally more effective communicators than female principals, or c) there would be no significant difference in perceived communication effectiveness or perceived communication activities between male and female elementary school principals. The practical implications of those outcomes would be as follows:

- (a) If female principals are perceived as being more effective communicators than male principals, then
 - (i) where individual assessment of abilities is impossible, and providing the legal structure allows, there may be justification for giving women preferential consideration for principalships, especially in schools where communication problems previously existed;
 - (ii) perhaps male graduate students of educational administration should receive additional training in communication skills.
- (b) If male principals are perceived as being more effective communicators than their female counterparts, then
 - (i) where individual assessment of abilities is impossible, and providing the legal structure allows, there may be justification for giving men preferential consideration for principalships, especially in schools where communication problems previously existed;
 - (ii) perhaps women aspiring to become principals should receive additional training in communication skills.

- (c) If no significant difference is found in perceived communication effectiveness or in the perceived communication activities of male and female principals, then this result would undercut any rationalization which is based on communication skills or on communication activities for biases either in favor of hiring women or in favor of hiring men for principalships.

Regardless of the outcome, there would be important implications with regard to the academic preparation of principals and/or with regard to hiring practices for principalships.

Assumptions

It was assumed that teachers and principals responded honestly to the questionnaire items.

It was also assumed that each full-time teacher within each school had an equal opportunity of responding to the questionnaire, and so, arbitrarily, it was assumed that 45 per cent or more usable teacher returns per school would be representative of teacher opinion in the school. An exception to this premise was made for smaller schools: in no case were fewer than three usable teacher responses accepted as being representative of staff opinion, even if, for example, two teacher responses constituted a 50 per cent return from a school with four teachers.

Limitations

This study was limited by the small number of female prin-

cipals in British Columbia's elementary schools.

As a result of the above-mentioned limitation, generalizations drawn from these results must be made with extreme caution.

Delimitations

This study focused on perceived communication effectiveness and on perceived communication activities. It did not attempt to:

- (a) examine psychological causes of communication effectiveness;
- (b) examine psychological causes of communication ineffectiveness;
- (c) examine communication effectiveness and communication activities of principals with superordinates;
- (d) examine communication effectiveness of principals with their respective teachers, as perceived and rated by the principals' superordinates;
- (e) examine environmental variables which may affect the communication effectiveness of principals;
- (f) create an independent indicator of communication effectiveness (e.g. create a tool for assessing communication abilities).

Definitions

1. Communication. Communication is the process - conscious or unconscious, verbal or non-verbal - by which information and attitudes are transmitted between individuals or groups of indiv-

iduals. For the purposes of this study, only the principals' written and oral communication with teachers were examined.

2. Effective communication. Effective communication provides for rapid feedback, is unrestricted and uninhibited by communication barriers. The message is perceived by the message receiver as being clearly (understandably) transmitted.

3. Communication barriers. Communication barriers are any factors that distort or block communication. There are, for example, barriers of status, of formality, of prejudices, of disinterest, of inattention, of physical separation, of timing, and of semantics.

Organization of the Thesis

Chapter one provides an introduction to the study at hand. It provides some background information, states the main problem with its associated sub-problems, outlines the importance of this problem, enumerates the assumptions, limitations, and delimitations of the study, and defines several key terms.

Chapter two contains a review of relevant literature in three areas which are critical to this thesis: a) women in educational administration, b) perception, and c) communication. In addition, it presents the major hypotheses of this study.

Chapter three contains a detailed description of the methodology used in this study. It introduces the test instruments, describes the population and the sample, and explains which sta-

tistical tests were applied to the data.

Responses from participant groups are described, and results of hypothesis testing are presented in chapter four.

Chapter five reports comments made by teachers and principals in the final section of the questionnaires.

Chapter six provides an analysis and interpretation of the findings.

Chapter seven summarizes test results and makes several suggestions for further research on the general topic of women in educational administration.

Chapter II

Review of Relevant Literature and

Orientation to This Study

Much has been written concerning the dearth of females in administrative positions. Many of those reports, however, are unsatisfactory because the authors either fail to describe adequately the sample and investigatory procedures used or they seemingly fail to do any research at all and thus appear to report only personal opinion. Exactly what are the causes for the current lack of women in educational administration? Are female candidates being unfairly rejected in favor of males? Are women, perhaps, less adept in requisite skills or otherwise less qualified for positions of authority? Or are they simply not interested in administrative jobs?

This general problem is examined in chapter II. Additionally, this chapter provides the framework for an investigation of one particular aspect of the problem: are women as adept as men in using the vital administrative skill of communication? Before the question itself can be dealt with, however, it is necessary first to understand the concept of perception as it relates to behavior and to evaluation, and, second, it is necessary to understand the nature of communication, particularly as it relates to factors which inhibit and factors which facilitate it.

I. Women in Educational Administration

Proportion of Male:Female Principals

Despite the fact that women represent over 50 per cent of the teaching forces in the United States and Canada, studies clearly indicate that women have been, and still are, greatly outnumbered by men in principalships. In addition, there are indications that not only is the number of female principals small, but it is decreasing. In 1928, for example, the United States' National Education Association reported 55 per cent of elementary school principals were women; by 1966, male elementary principals outnumbered female principals three to two, although women teachers out-numbered their male counterparts seven to one (Harc, 1966:12); by 1973, only 20 per cent of elementary principalships were held by women, even though 84 per cent of elementary school teachers were women (Fishel and Pottker, 1975:110). The situation has been much the same for U. S. secondary schools. According to 1971-72 National Education Association figures, 45.8 per cent of the secondary teachers were women, but only three per cent of secondary principals were women (Taylor, 1973:124 and 126). This general disparity in the proportion of male to female principals has also been reported by Neidig (1973), Lyon and Saario (1973), Seawell and Canady (1974), and Stiles and Nystrand (1974).

Canadian studies also have revealed that women are in a minority of school principalships, but, unlike many of the U. S. reports, these studies reflect regional differences. Bernice

McDonough's 1967 figures for lower mainland British Columbia reveal only five out of a total 250 principalships were held by women (1967:354); McDonough did not specify how many of those female principals were in secondary schools. In 1975, however, John Young reported there were no female principals at the secondary level throughout the entire province of British Columbia. Further, at the elementary level, "68 per cent of the teachers are women, but only 18 per cent of them are principals -- and most of them are principals of small, isolated, rural elementary schools" (1975:20).

In 1967, the Winnipeg school system had 51 male principals and 28 female principals (McDonough, 1967:355). Ontario had 400 out of 5,700 principalships (7 per cent) filled by women in 1970, according to the Ontario Federation of Women Teachers' Association (Hersom, 1972:13).

Looking at Alberta schools, Nixon and Hrynyk reported that although the number of female teachers increased from 10,816 in 1968 to 11,372 by 1970, the number of female principals decreased from 207 in 1968 to 155 in 1970. In contrast, while the number of male teachers increased from 5,183 to 6,034 during the same 1968-1970 time span, the number of male principals also increased from 986 in 1968 to 1,020 in 1970 (1973:10-11). These figures are slightly misleading because the proportion of women teachers actually decreased, although the number of women teachers increased. In terms of percentages, then, the proportion of female teachers declined from 68 per cent in 1968 to 65 per cent in 1970; the proportion of female principals decreased from 17 per cent in 1968 to 13 per cent in 1970.

Stereotypes

Literature concerning the lack of women in administrative positions seems to leave largely unchallenged the assumption that girls have been conditioned to "think of themselves as students [whose] future beyond high school or university [is] an early marriage" (Shack, 1973:68). This traditional, domestic image of women is often cited as a major stumbling block to women who might otherwise seek professional advancement. While not appearing to support her claim with details of any methodical investigation, Bernice McDonough says one of the frequently voiced objections to appointing women to top administrative positions is that "women have too many home responsibilities; they cannot give enough time and attention to the job" (1967:356). Rosen and Jerdee, in referring to a study by Gilmer in 1961, said that 65 per cent of the male managers in Gilmer's sample believed women would be inferior to men in supervisory jobs because women probably would have higher absenteeism than men (1973:45); presumably the belief that women would be absent from work more often than men reflects the notion that women are distracted by responsibilities of home life. Variations on this general theme are found in articles by Nixon and Hrynyk (1973) and by Meskin (1974).

According to Sybil Shack, the province of Ontario attempted to test the validity of the assumption that household responsibilities prevent women from giving adequate time and attention to a job outside the home. Results indicate that assumption may be false.

. . . 61 per cent of married women in the elementary schools . . . reported their family responsibilities as interfering either very little or not at all with their work as a teacher (Shack, 1973:40).

Results of similar research done in Edmonton, Alberta, by Nixon and Gue support the Ontario findings (September, 1975:204; November, 1975:4).

Combined with the above-mentioned stereotype of women is the prejudice that some jobs are traditionally male, while others are traditionally female. Nixon and Hrynyk found "school administrator" to be regarded as a male role (1973:23); the Royal Commission on the Status of Women in Canada found "secretary" and "elementary school teacher" to be classed as female occupations (1970:59). Dr. Pauline Jewett, president of Simon Fraser University, summed up the implications of such job-typing by saying, ". . . women are not in management positions because society is not yet prepared to accept women in positions of authority" (Woodcock and Sullivan, 1975:2).

Male Attitudes

Results of studies done by Barter (1959), Jenkins (1966), Timmons (1973), Matheny (1973), Linton (1974), and McKinnon (1974) revealed male teachers as having a more favorable attitude toward male principals than toward female principals. Barter also found that male teachers who had worked with a female administrator were more favorable toward women as principals than were male teachers having had no such experience (1959:41); but Timmons' and Linton's

respective results did not support this latter finding of Barter's. On the contrary, their results indicated attitudes toward women as principals were not dependent upon previous experience with a woman principal. And, with regard to other variables, Timmons reported

. . . no significant differences in attitudes toward women school administrators were associated with age, years of experience in education, level of education, level of position, . . . having held an administrative position, and aspirations for an administrative position (1973:4660A).

Attitudes toward advancement into administrative positions are not the same for men as for women. Male teachers aspire to becoming principal more often than do women (Barter, 1959; Burns, 1964; Timmons, 1973); this factor alone may be a major reason why there are significantly more men than women in principalships.

But women who do aspire to the principalship may face the two-pronged barrier of prejudice and stereotyping. For example, in attempting to determine attitudes toward females in administration, Neidig (1973) sent questionnaires to school board members in Iowa's fifty largest school districts. With forty-two districts responding, Neidig discovered significantly more male than female board members believed women unable to cope with the emotional and physical stress of administrative positions, and significantly fewer male than female board members would be willing to employ women to top administrative positions (1973:298A).

Female Attitudes

Sybil Shack asserted that "women either entering the pro-

fession or already teaching rarely have ambitions for promotion" (1973:35). Although Shack's opinion is not clearly based on results of any particular studies, that view appears to be supported by Barter's findings. Out of her sample, Barter indicated 46 per cent of the men teachers, as opposed to 7.8 per cent of the women teachers, were definitely interested in the elementary principalship as a career (1959:41). Nixon and Hrynyk also found that more than half of the superintendents who participated in their study advanced the opinion that "few women achieved in-school administrative positions because women themselves lacked interest in achieving such appointments" (1973:1).

If it is true that women are not interested in seeking administrative careers, one cause may be that, justifiably or not, they are discouraged at the outset. Hare suggested "some women . . . are reluctant to undertake the [educational] program leading to administration because they feel the odds against them are too great - that they would be wasting their time and money" (1966:13). And although Hare does not mention whether or not her conclusion is based on research results, studies by Mathney (1973) and by Nixon (1975) indicate women do believe opportunities for their own advancement within the profession are not the same as males' opportunities. The majority of female teachers in Mathney's sample perceived a bias in favor of men in the selection of administrative personnel; further, a majority of both males and females agreed that men receive more encouragement to seek administrative positions from their superiors (1973:2976A). Some participants in

Nixon's sample expressed the belief that women need to be more talented and more qualified than men if they hope to compete successfully against men for administrative jobs (1975:172).

But where women do hold administrative posts, are they favorably regarded by female subordinates? There are conflicting reports concerning this matter. In discussing "The Politics of Sex in Education," Stiles and Nystrand maintain women are prejudiced against women administrators and women prefer to work for a weak male rather than for an outstanding female leader (1974: 438). This opinion is not upheld by research findings. On the contrary, Barter (1959), Jenkins (1966), Timmons (1973), and McKinnon (1974) found that although male and female teachers are generally favorable toward women principals, female teachers are more favorable toward female principals than are male teachers.

Academic Preparation

Studies undertaken in the United States by Barter (1959) and by Timmons (1973) indicate male teachers are better prepared academically for appointments to the principalship than are female teachers. It is not clear whether Burns' California findings support those of Timmons in Indiana and of Barter in Florida; although Burns reported approximately two-thirds of the women in her sample held master's degrees and one-tenth held doctor's degrees, she failed to give comparable figures for the males.

Canadian studies also suggest women teachers are not as well prepared academically as men teachers for advancement within

the profession. In comparing years of teacher education for male and female teachers in Alberta for the 1969-70 school year, Hersom found a much larger proportion of the male teachers had five and six years of teacher preparation - 20.6 per cent of the men had five years, compared to 12.9 per cent of the women, and 12.5 per cent of the men had six years, compared to 6 per cent of the women (1972:17). Reporting 1969-70 nation-wide statistics, excluding the provinces of Ontario and Quebec, Shack recorded that only 28 per cent of the female teachers had a university degree of any kind, compared to 67.4 per cent of the men who at least had a first degree (1973:11).

With regard to graduate work in educational administration, the United States' University Council for Educational Administration (1971-72) disclosed a low figure of 8 per cent as the female portion of the student population in departments of educational administration (Lyon and Saario, 1973:121). Given this percentage, Lyon and Saario concluded: ". . . women are not even moderately well represented in educational administration graduate programs . . . and so have not gained equal access to . . . administrative advancement in public education" (1973:121). However, Lyon and Saario went on to imply that the 8 per cent figure is indicative of some discrimination on the part of admissions personnel to prevent women from having "equal access to . . . administrative advancement in public education." Such an interpretation is unwarranted in this instance since no information was provided concerning numbers of women who applied for entrance into educational

administration programs. It is possible that there has been no discrimination against female applicants; there simply may have been a dearth of them. This latter interpretation is supported in Canada, at any rate, by Statistics Canada. As summarized by Margaret Anderson (1975), Statistics Canada found fewer women elect graduate work than men - only 25 per cent of all master's students and 18 per cent of all PhD. students in Canada are women (1975:6). Naturally, 18 per cent is a nation-wide figure and is not always indicative of individual universities, nor of how many female doctoral candidates successfully complete graduate studies. The situation at the University of Alberta, for example, was as follows:

In the history of the Department of Educational Administration at the University of Alberta, there have been two women out of a total of 74 PhD. graduates [less than 3 per cent] during the period 1958-1970 (Hersom, 1972:18).

Granted, both these University of Alberta figures and the nation-wide percentages are low, but that does not mean Lyon and Saario are correct in concluding there is discrimination against women. Such figures merely indicate further research is needed to determine why so few women pursue graduate work.

Perhaps the question of discriminatory practices in graduate school admissions is not as tenable as is the problem of inadequate financial assistance to women entering graduate programs. In the 1970 Report of the Royal Commission on the Status of Women in Canada, the Dominion Bureau of Statistics' figures indicated that although there was no substantial difference between the essential expenses of men and women graduate students, and although the same

percentages of men and women received scholarships and grants, men received proportionately more financial support than did women.

Thirteen per cent of females and 19 per cent of males received in excess of \$600; four per cent of females and nine per cent of males received stipends in excess of \$1,500 (1970:177).

However, once women do enter graduate school, are they encouraged to stay and complete their program? An interesting study conducted by Kjerulff and Blood (1973) suggested "patterns of verbal communication with professors . . . are different for female than for male graduate students" (1973:624), and this difference is one factor which discourages women from remaining in graduate school. Specifically, Kjerulff and Blood's findings were:

- a) women viewed their relationship with their research advisor as "less relaxed, equalitarian, casual, or friendly" than men did;
- b) the more the women viewed their relationship with their advisor as casual and equalitarian, the greater number of discussions they had with the advisors; and c) the more the males perceived their relationship with their research advisors as interesting, the more discussions they had with the advisors in an outside-of-the-office context. The latter finding (c) did not hold true for women; the difference between males and females on this third item was significant at $p < .01$, with women having significantly fewer of these "outside the office" discussions than men. Kjerulff and Blood concluded that by not having outside the office interaction with professors, female graduate students "miss out on a type of informal communication which could be helpful both in terms of acquiring research information, and developing feelings of belonging in the

field" (1973:630).

Although Kjerulff and Blood's findings open interesting avenues of speculation, it is not clear that their results are generalizable. Their sample consisted of "male and female graduate students in a department of psychology;" the university was not specified. With such a small sample, Kjerulff and Blood's results could be more indicative of the rapport between professors and female graduate students in a particular department at a particular institution, rather than indicative of any general state of affairs.

Salaries

Some researchers state administrative salaries for women are disproportionately lower than for men. In the United States, for example, Taylor (1973) pointed to census data as revealing the following differences:

The average salary for 80,000 male school administrators was \$13,625 in 1970. The average salary for 18,000 female administrators was almost \$5,000 less. The Census Bureau also noted that 37 per cent of the men, but only 16 per cent of the women, earned more than \$15,000 (1973:125).

Unfortunately, Taylor failed to state whether or not the male and female administrators were equally qualified in educational background and experience; she also failed to indicate whether or not the women held equally high administrative posts. In light of studies which have shown men to have more academic preparation than women (Barter, 1959; Hersom, 1972; Lyon and Saario, 1973; Shack, 1973; and Timmons, 1973), and also in view of findings which have

revealed women as occupying the lowest administrative levels (Lyon and Saario, 1973; Nixon and Hrynyk, 1973; Stiles and Nystrand, 1974; and the Senate of the University of Alberta, 1975), it would be reasonable to question Taylor's statistics. Exactly what are they measuring? The inequality in salary could be more symbolic of unequal training and experience than of unfair discriminatory practices.

Looking at elementary and secondary school teachers' income, it would initially appear that the Women's Bureau of the Canada Department of Labour has controlled for differences in educational background and in teaching experience. Teachers have been grouped according to educational background and age; the latter variable presumably is a rough indicator of years teaching experience. In every category where there was enough data to make meaningful comparisons, male salaries were from \$526 to \$4,851 higher than female salaries (1975:123-124). However, there are mitigating factors. For example, age may not be truly indicative of teaching experience. What per cent of women take off how many years from teaching to raise a family? A few years' absence from work could help account for salary disparity in most age categories, but if motherhood alone was the cause of wage disparity, then that difference should largely disappear in the last age category (55-64), assuming both men and women reach the top of the salary scale by then. Yet, with one possible exception, the salary gap is not closed (1975:123-124). What else might account for the difference? Are department chairmen's salaries included in these figures? If

so, what is the proportion of male to female department chairmen? Are there some unfair practices which account for those salary differences? It is not possible to answer such questions without more information.

At the university level, too, Canadian data reveal a definite disparity in salary between male and female professors. Statistics Canada reported that in the Atlantic provinces the 1975 median salary for male assistant professors was \$550 higher than was the median salary for women assistant professors; it was \$600 higher for males in Ontario, \$500 higher for males in the Western provinces, and \$400 higher for males in Quebec (1974). Concerning positions of associate professors in 1975, males were paid on the average of \$1,250 more than females in the Atlantic provinces, \$825 more than women in Ontario, \$650 more than women in the Western provinces, and \$250 more than women in Quebec (1974). Then, with regard to full professorships in 1975, men were paid an average of \$1,600 more than women in the Atlantic provinces, \$2,150 more than women in Ontario, \$1,475 more than women in the Western provinces, and \$100 more than women in Quebec (1974) (1975:12).

Within administrative ranks, the University of Alberta's Senate Task Force on the Status of Women found that female Administrative Professional Officers (APOs) are, on the average, older and more experienced than men, but are seemingly kept in the three lowest positions (out of five levels of advancement) and are paid "substantially less [at least \$1,000 less] . . . at each salary level" (1975:15). It is wise for one to be cautious in making

sweeping generalizations from the University of Alberta's AFO salary distribution; nevertheless, such figures do indicate there may be some basis for allegations of unjust wage differences between male and female administrators who have comparable training and experience, and who hold comparable positions of responsibility.

Other Findings

As reported by Meskin (1974), Hemphill, Griffiths, and Fredericksen positively support female administrators as a result of their 1962 study in which teachers of selected United States' elementary schools rated their respective principal's performance.

In the first place, when elementary principal performance was evaluated by teachers and by superiors, both groups were somewhat negative toward men principals and generally positive toward women principals. . . . In general, the difference between men and women in their performance . . . is that women involved teachers, superiors and outsiders in their work, while men tended to make decisions and take action without involving others (Meskin, 1974:2-3).

A similar finding was reported by Seawell and Canady in their summary of an investigation conducted by the National Association of Elementary School Principals. The latter study found male principals tend to "dominate" when decisions are made regarding instructional methodology, whereas female principals work more cooperatively with faculty in such matters (1974:47). And these findings, in turn, may therefore support an earlier study by Wiles and Grobman which found that "women are ranked significantly ahead of men as democratic principals" (1955:77).

As was summarized in an article by Meskin (1974), research done by Gross and Trask in 1964 showed that female principals are

perceived by their respective teachers as "more concerned with the individuality of their students and . . . faculty . . . than men are" (Meskin, 1974:3). A related finding which grew out of Roussell's examination of another administrative level, the department chairmanship, indicated teachers perceive female department chairmen as being more considerate than their male counterparts (1974:216).

Hemphill, Griffiths, and Fredericksen also found women principals to be better in "exchanging information, maintaining organizational relationships, and responding to outsiders" (Meskin, 1974:2). If these characteristics are representative of the United States' population of female principals - and the three researchers themselves are cautious about drawing such a generalization - those characteristics might help account for Hoyle's results. Hoyle (1969) said teachers in his sample described female administrators as noticing potential problem situations and as reviewing results of action significantly more often than did male principals (1969:24).

Both the United States National Association of Elementary School Principals and the Virginia Association of Elementary School Principals found female principals to be older and to have more years teaching experience than male principals (Seawell and Canady, 1974:46-7). In Canada too, similar results were obtained by Nixon and Hrynyk in their 1973 investigation of Alberta schools.

In the previously-mentioned study by Nixon and Hrynyk, there is one other interesting finding. In 1972, less than 9 per cent of all Alberta applicants for administrative appointments were women

(1973:1). Thus, as Nixon and Hrynyk suggest, discrimination against women may not be as much a factor in preventing women from advancing within the profession as is the simple absence of female applicants for administrative posts.

II. Perception

Introduction

As was seen in the previous section, much of the literature concerning women in educational administration involves people's perceptions of how well women function in administrative positions. Naturally, such perceptions can be influenced by each individual's expectations of, previous experiences with, and biases for or against female administrators. But, however they are molded, perceptions are of the utmost importance because they constitute the framework of the "reality" which ultimately will determine one's behavior.

The organism reacts to the field as it is perceived and experienced. This perceptual field is, for the individual, 'reality.' . . . Whatever he thinks is true, whether it is actually true or not, is reality, and it is this subjective reality which determines how he behaves (Hall and Lindzey, 1957:479).

Hence, assessments of female administrators by their subordinates are linked to perceptions of female administrators by their subordinates.

Society, Experiences and Expectations

All of the ways in which we deal with environmental complexity at the perceptual level are deeply tinged with the hues of

the society in which we live (Maccoby et al., 1958:87).

A society's values reflect and reinforce the values of its dominant social group. Such values are resistant to dramatic change and, as such, tend to perpetuate "traditional" ways of doing things. Tradition, then, is fostered and protected by perceptual defense, or the process of "blocking out perceptions which do not fit into established patterns of thought or which call into question firmly held beliefs" (Enns, 1966:25). At an operative level, if "woman's role" is generally accepted as being homemaker and mother (Nixon and Hrynyk, 1973; Schack, 1973; Meskin, 1974), then it is highly unlikely a woman would be seriously considered for a "man's job." And so, if Canadians do tend to regard "school administrator" as a male role (Nixon and Hrynyk, 1973), it would not be surprising to find a dearth of female school administrators in Canada.

Related to the influence of societal values on an individual's perceptual process is the importance of expectations and assumptions. An individual's expectations can be based on societal values. If, for instance, society generally holds that "a woman's place is in the home," then individuals may assume women cannot adequately perform "men's jobs." Such a pre-conceived notion, in turn, leads to the expectation that if any woman does happen to secure a "man's job," she either will perform that job poorly or she is atypical. Perhaps the difficulties inherent in overcoming negative expectations result in the belief that women need to be more talented and more capable than men if they hope to compete

successfully for "male jobs" (McDonough, 1967; Matheny, 1973; Timmons, 1973; and Nixon, 1975).

Perceptions can also be influenced by one's past experiences, since experiences lead to future expectations which, in turn, determine one's predispositions (Cantril, 1957; Zalkind and Costello, 1962; and Bosetti, 1973). Thus, if a teacher who is skeptical about working under a female principal has a bad experience with that principal, he will tend to be negatively predisposed to working under a second female principal. His subsequently low expectations may very well be realized since "we perceive what we expect to perceive in a situation" (Enns, 1966:24).

Stereotypes, Status and Self-Concepts

Stereotypes, like expectations, can distort perceptions because they too are rooted in the presupposition that a particular "type" of person's behavior is predictable.

Stereotypes are relatively simplex cognitions of social groups which blind the individual to the manifold differences among the members of any group - racial, ethnic, age, sex, social class - and tend to freeze his judgments (Krech et al., 1962:53).

It seems obvious from studies previously cited that women have been stereotyped in North American society as being emotional, domestic-oriented, and suited primarily for roles such as housewife, nurse, secretary, and elementary school teacher (McDonough, 1967; Royal Commission on the Status of Women in Canada, 1970; Nixon and Hrynyk, 1973; Neidig, 1973; Rosen and Jerdee, 1973; Shack, 1973; Meskin, 1974; and Nixon, 1975). From such stereotypes

come attitudes, preconceived notions, which can create significant barriers to equal employment opportunities for women.

Status differences also can lead to inaccurate perception (Krech, 1962; Zalkind and Costello, 1962; and Enns, 1966). Because people are sensitive to things which concern their own positions, they may not be aware of how those same things affect another's position. "Thus teachers and principals may see the same [situation] in entirely different ways because of the difference in the nature of their positions" (Enns, 1966:25).

Often related to status is self-concept, which is also an important factor influencing the perceptual process. An individual's self-concept largely determines what he will perceive because, as was noted earlier, one unconsciously tends to perceive what one wishes or expects to perceive. If, for example, the individual has a good self-image, he will perceive those things which reinforce that image; shortcomings, on the other hand, likely will be glossed over or will go unnoticed.

. . . self concepts determine what the individual considers to be necessary and appropriate behavior, and as a result, they tend to cause him to screen out selectively facts and events which are inconsistent with his self image. Since one of the prime needs of the individual is to maintain his self image, he tends to select those perceptions which conform with what he believes (Bosetti, 1973:36).

Ignorance of one's shortcomings can be especially damaging in the context of a school system if someone in a key leadership role, like a principal or a superintendent, is insensitive to his own weaknesses. In such a case, the administrator may fail to respond to negative feedback until potential problems become serious realities.

Perception and Educational Administration

Because perceptions play a significant role in interpersonal behavior, they comprise an important part of educational administration. "The way in which an administrator defines a situation and the manner in which he fulfills his role . . . is dependent both on his own perceptions and on the perceptions of other members of the organization" (Bosetti, 1973:35).

One of the vital administrative skills closely related to accurate perception is effective communication. Understanding between subordinates and superordinates is contingent upon the existence of effective communication which is, in turn, dependent upon the adequacy of interpersonal perception.

. . . in issuing directives, giving instructions, giving explanations or making reports all the potential difficulties of inter-personal perceptions are present. The characteristics and status of the communicator may interfere; the characteristics of the receiver of the communication may interfere; and the variables of the situation may cause distortions in the perceptions of either or both (Enns, 1966:26).

Many problems in communication, and in educational administration generally, can be avoided if administrators and teachers are aware of the perceptual process and its associated limitations. Understanding of and sensitivity to perceptual pitfalls should enable school personnel to modify appropriately their own behavior and consequently escape costly misjudgments which can undermine the health of an organization by breeding suspicion, hostility, and poor interpersonal relationships (Zalkind and Costello, 1962; Enns, 1966; and Bosetti, 1973).

III. Communication

Introduction

Effective administration of organizations is directly dependent upon effective communication; thus administrators - whether male or female - must have the ability to communicate well. That ability will necessarily be contingent upon how well others perceive the administrator's communication attempts. Such perceptions, in turn, may be distorted by interpersonal problems like predispositions and expectations, or they may be distorted by organizational problems like status differences.

This section will serve two ends. First, it will describe many of the difficulties an administrator may face in attempting to communicate with subordinates. Second, by outlining which factors inhibit and which factors facilitate communication, this section will provide a framework for the communication activities test instrument which was used for data gathering in this research project.

The Nature of Communication

Numerous articles and books have been written about communication; numerous definitions of communication likewise have been formulated. Some of the definitions are confined to verbal communication, others to nonverbal; some refer only to conscious acts of communication, others to unconscious acts. But all of the definitions include the concept(s) of idea transmission and/or reception.

Customarily, the basic components of communication are identified as being a) source, b) encoded message, c) channel or medium, and d) receiver and destination (Schramm, 1955; Sergiovanni and Starratt, 1971; Friesen, 1974; and Pulley, 1975). The source, or communicator, is the individual or group that has information to be shared with others. The information is encoded into words, graphics, or other symbolic form and is now called the message. A channel - such as television, letter, newspaper, telephone, or conversation between/among individuals - is then used to transmit the message. The receiver decodes and interprets the message for the individual(s) or group(s) constituting the intended destination of the message.

A final and vital aspect of communication is feedback. Assurance that a given message has been accurately interpreted by the receiver cannot be attained without feedback from that receiver. Reactions to messages tell communicators how well their statements are being understood; they indicate whether or not correction or clarification is needed (MacKay, 1963:33).

Barriers to Communication

1. Organizational barriers are any factors "built in" to the organization that can distort or prevent communication (MacKay, 1963:35). Examples of organizational barriers are listed below.

(A) Physical distance: Co-ordination of and cooperation in complementary activities can be greatly hampered if the parties involved are separated by too great a physical distance (Thayer,

1961:142). Such separation means more time is required for the receiver to receive messages and for feedback to come from the receiver. This latter delay could prove damaging to the communicator, especially if timing is a critical factor in determining the effectiveness of his message. ". . . any factor restricting on-the-spot adaptability of the communicator limits his benefits from feedback" (Sergiovanni and Starratt, 1971:175). As MacKay points out, this barrier can have important implications for communication between school staffs and outside units such as the superintendent's office and the department of education (1963:35).

(B) Technical barriers: Misuse of available vehicles of communication results in poor communication (Bacon, 1971:33). Indiscriminate use of a school's public address system and/or overreliance on any method of communication which rules out the possibility of feedback will prevent effective communication from taking place. Similarly, communication effectiveness will be jeopardized wherever gatekeepers exist in an organization. Gatekeepers are those persons who are in positions where they can "manage" information. They can (deliberately or not) misinterpret, edit, or suppress information before other members of the organization have a chance to receive it (MacKay, 1963:34). A particularly damaging gatekeeper can be the principal of a school since, as will be discussed in the next paragraph, the principal himself already may constitute a status or authority barrier.

(C) Status/authority barrier: MacKay asserts there is always the possibility of restricted and unidirectional communication flow

whenever a formally designated leader exists (1963:36). Further, Costello and Zalkind indicate that even when two-way flow of communication exists between subordinate and superordinate, status differences cause communication distortion (1963:458).

(D) Job specialization: Like physical separation, job specialization can contribute to poor communication. MacKay says this is an outcome of people thinking and functioning within different frames of reference, such as teachers of academic subjects contrasted with other specialists like physical education teachers or industrial arts teachers (1963:36). Such specialization often leads to the use of argot, or the particular vocabulary of sub-groups within an organization and/or culture. Argot can prevent "outsiders" who don't share these "insider" meanings from understanding what has been said.

(E) Cost: If it is excessive, cost - in terms of time, effort, and money - can also be a barrier to adequate communication (MacKay, 1963:36). This factor would likely threaten large organizations which have a high degree of job specialization and/or physical distance separating organizational members.

2. Interpersonal barriers are "human factors" that prevent communication from being effective (Friesen, 1974:146).

(A) Semantic barriers: When, through semantic difficulties, a message receiver misunderstands what a communicator means, communication is ineffective. "Most failures in communication are probably due to mistaken assumptions, by both source and receiver, about correspondence of meanings ("Perception . . .", p. 2). Since words

are only rough symbols of thought, and since the full denotative and connotative meaning of a word is influenced by each individual's past experiences, no two people will assign exactly the same significance to any given word (Morris, 1967:32). Consequently, there is frequently bound to be some degree of error in communication attempts resulting from semantic misinterpretation.

(B) Value barriers: Porter says values influence people's social perception by providing certain standards from which people can judge the behavior of others (1972:7). Berlo echoes this idea when he declares:

No source communicates as a free agent, without being influenced by his position in a social-cultural system. . . . We need to know where he fits in that social system, the roles he fulfills, the functions he is required to perform . . . the accepted forms of behavior that are acceptable or not acceptable . . . his own expectations and the expectations others have about him (1960:49).

Thus value systems can contribute to communication difficulties, and such would be the case if one of the parties involved in the communication process fails to conform to socially prescribed role expectations.

(C) Attitude barriers: Attitudes are, to a great degree, influenced by values; values predispose us to judge favorably or unfavorably the behavior of others. Other attitudes - those shaped by emotion, extreme skepticism, pre-conceived notions, and the like - constitute barriers to communication too. If, for example, a superordinate views himself as a source of directives and is not interested in the views of his subordinates, then it is unlikely that the subordinates will develop enough rapport with the superordinate to stimulate the growth of trust. And trust is essential, for

without "trust and confidence between people involved, the most grandiose communications network is doomed to failure" (MacKay, 1963:37).

(D) Conclusions: Communications tend to be perceived and interpreted by the message receiver in terms of his own values, needs, desires, and expectations (Enns, 1966; Bosetti, 1973). Also, status differences influence the manner in which one perceives communications (Krech, 1962; Zalkind and Costello, 1962; Enns, 1966; and Hess, 1969). Thus, for example, the position of the principalship is perceived differently by different people; and communications from the principal are not always interpreted in the way they were intended. "The fact that the principalship is . . . viewed by individuals and groups in a wide variety of ways is sometimes an inhibiting factor in the transmission of messages to their intended destination" (Pulley, 1975:51). Factors such as the ones mentioned above can cause the intended message to become distorted; such factors are called "noise" (Friesen, 1973:145) and they constitute barriers to effective communication.

Effective Communication

The literature on communication suggests several considerations for administrators who wish to improve and/or maintain effective communication among organizational members.

1. Attitude: Having an open mind and being sensitive to the values, views, and attitudes of others can be vital in develop-

ing a feeling of trust (Costello and Zalkind, 1963; MacKay, 1963; Enns, 1966; Borman et al., 1969; Howel, 1972; "Perception . . ."; Friesen, 1974).

2. Reduce "noise": It is important to concentrate on what is being said. By keeping one's mind on what is being said, both the listener and the communicator can avoid mistakes in understanding that might otherwise be made (Borman et al., 1969; Mulford, 1971). Also, one should alter voice tone to suit the meaning of the message. By altering voice tone, the communicator can emphasize or make light of certain aspects of his message. Voice tone is especially important because "every word you use can take on many different meanings, depending on how you say it" (Wiksell, 1960:43). Using the wrong tone at the wrong time can lead to misunderstanding.

3. Flexibility: Thayer (1961), MacKay (1963), Borman et al. (1969), and Friesen (1974) emphasized the need for communicators to be flexible in their methods of communicating.

Many people mistakenly assume that habitual modes of handling communications are the most efficient. . . . Like all of the behaviors we repeat . . . our methods of communication become fixed and hence usually inefficient habits (Thayer, 1961:94, 264).

Flexibility in communication would increase the probability that the message would be received and understood by everyone with whom the message-source intended to communicate. Following up a formal message with an informal reminder, or vice versa, would

help avoid barriers to communication; "the source has a better chance of getting understanding from the receiver if he utilizes several channels" ("The Nature of Communication", p. 2). Not only would the communicator increase his chances of being well understood, but he might also be able to circumvent gatekeepers. By using several channels, he may be able to contact everyone directly, and thus he could minimize the possibly negative effects of having information funneled through gatekeepers.

4. Feedback: Schramm (1955), Thayer (1961), MacKay (1963), and Sergiovanni and Starratt (1971) stress the importance of feedback. The more immediate the feedback, the greater the likelihood a message can be appropriately modified. Not only promptness, but quality and quantity of feedback is necessary. Administrators need a variety of feedback sources to accurately assess how well the organization is functioning. "One source, or even a few sources, cannot be relied upon to provide all of the information the administrator may need in the form in which he may need it" (Thayer, 1961:40).

Oral, two-way communication is regarded as being a particularly important style of communication because of the corrective benefits it affords through immediate feedback (Thayer, 1961; MacKay, 1963; Borman et al., 1969). As a result of this immediate feedback capability, oral, two-way communication has the greatest potential for effecting accurate transmission of messages.

Communication and Administration

Organizations, and the administration of organizations, are dependent on effective communication (Miklos, 1968; MacKay, 1963; Mulford, 1971; and Sergiovanni and Starratt, 1971). Without communication there can be no organization. Further, for organizations to function efficiently, people should be able to "have the information they need, and have gotten it without exerting undue efforts" (Sergiovanni and Starratt, 1971:102). There must be relatively accurate communication flow vertically and horizontally within the organization itself, as well as adequate communication between the organization and the surrounding environment (Miklos, 1968; Friesen, 1974). Administrators themselves must have the ability to communicate since that ability is "the most used, and the most usable - hence the most valuable - ability any administrator may exercise in his job" (Thayer, 1961:3).

Within a school system, principals occupy strategic positions. It is the principal who maintains communication in the school; it is he who most often channels information from his school to the school system and to the community; and it is he who most often receives information from outside-the-school sources and passes it along to staff members (Miklos, 1968; MacKay, 1963). Further, a principal uses communication skills to negotiate grievances, influence opinions, and solve problems (Sergiovanni and Starratt, 1971:175).

IV. Discussion

Much has been written on the subjects of communication, perception, and women in administration. Most of the literature in these areas is concerned with empirical studies done by psychologists and sociologists, particularly in areas related to social norms, perceptual processes, attitudes, and behavior.

Since perceptions are influenced by attitudes, experiences, expectations, social norms, and values, the perceptual process plays a significant role in determining people's predispositions for or against females who seek appointments to administrative positions. Perhaps more important, women's perceptions of themselves and "their role" seem vital in determining whether or not they will strive for advancement within the profession.

Women who do succeed to administrative posts will need to have - like all administrators - good communication skills. And perceptions become critical here too, since people's attitudes toward a communicator predispose them to interpret the communicator's message in ways that conform to their own biases. Hence, as would be the case for all principals, a female principal's communication attempts may be distorted and misinterpreted because of status differences between teachers and principals; but, additionally, interpretations of her communications may be colored by negative attitudes toward her as "an interloper in a man's domain." If, in fact, her attempts to communicate are distorted by such barriers, she could be an ineffective communicator and ultimately an ineffective administrator.

V. Orientation to This Study

This research project attempted to compare the perceived communication activities and the perceived communication effectiveness of male and female elementary school principals. In other words, it considered two major hypotheses: a) there is no significant difference in the communication effectiveness of male and female elementary school principals; and b) there is no significant difference in the communication activities of male and female principals. The very general nature of the two major hypotheses made it impossible to test these hypotheses directly, so it was necessary to break them down into a number of specific, non-ambiguous sub-statements. The major ambiguity in the first hypothesis concerned measurement. Who or what would be the measure of a principal's communication effectiveness? And would that measure be objective or subjective in nature? For the purposes of this study, three subjective measures of a principal's communication effectiveness were employed: a) the perceptions and evaluations of the principal's teachers, b) the self-ascribed scores of each principal, and c) a comparison of the principal's self-ascribed scores with the ratings of his/her respective teachers. The three sub-statements, henceforth referred to as the Effectiveness Hypotheses, were evaluated on the basis of participants' responses to questionnaire item 20 ("The principal communicates effectively with teachers").

The Effectiveness Hypotheses: There is no significant difference in the communication effectiveness of

male and female elementary school
principals.

EH_{OA}: There is no significant difference in the communication effectiveness of male and female elementary school principals, as perceived and rated by teachers.

EH_{OB}: There is no significant difference in the communication effectiveness of male and female elementary school principals, as revealed by the self-ascribed ratings of principals.

EH_{OC}: There is no significant difference between the teacher-assigned ratings and the principals' self-ascribed ratings regarding principal communication effectiveness.

The second hypothesis ("There is no significant difference in the communication activities of male and female principals") contained several ambiguities which made it impossible to test that hypothesis directly. As with the first hypothesis, the question of measurement arose; and, as with the first hypothesis, the following three measures were employed: a) the perceptions and evaluations of the principal's teachers, b) the self-ascribed scores of each principal, and c) a comparison of the principal's self-ascribed scores with the ratings of his/her respective teachers. These three measures led to the development of three sub-statements for the second hypothesis; those sub-statements are listed below and are designated by the letters AH_{OA}, AH_{OB}, and AH_{OC}. However, there was an additional ambiguity: what constituted "communication activities"? Was non-verbal communication included? Was the influence of voice

tone on communication considered? The questionnaires used in this study were not designed to cover all aspects of communication; they were designed to cover some of the more important areas of communication that were discussed in the reviewed literature (see pages 31-39). To avoid problems which could arise from the general phrase "communication activities," a number of specific sub-hypotheses were developed for each of the three sub-statements. These sub-hypotheses were based on the individual questionnaire items. Henceforth, the three sub-statements with their respective sub-hypotheses will be referred to collectively as the Activity Hypotheses.

The Activity Hypotheses: There is no significant difference in the communication activities of male and female elementary school principals.

AH_{OA}: There is no significant difference in the communication activities of male and female elementary school principals, as perceived and rated by teachers.

As perceived and rated by teachers, there is no significant difference between male and female elementary school principals in the frequency:

AH_{OA}(1): of their written communication with teachers.

AH_{OA}(2): with which their written communication to teachers is clearly stated.

AH_{OA}(3): with which they select appropriate types of written communication.

AH_{OA}(4): with which they receive written communication from teachers.

- AH_{OA}(5): with which they seek the personal opinion of individual teachers on school matters.
- AH_{OA}(6): with which they seem genuinely interested in knowing individual teachers' views on major school issues.
- AH_{OA}(7): with which they attempt to understand the rationale behind individual teachers' opinions on major school issues.
- AH_{OA}(8): with which they are sought out by individual teachers for discussion of school matters.
- AH_{OA}(9): with which they give complete attention to individual teachers who are speaking with them.
- AH_{OA}(10): with which they seem relaxed when talking with individual teachers.
- AH_{OA}(11): with which their teachers feel relaxed when talking to them.
- AH_{OA}(12): with which they effectively exchange information with their teachers at staff meetings.
- AH_{OA}(13): with which they express their ideas concisely at staff meetings.
- AH_{OA}(14): with which they mean exactly what they say.
- AH_{OA}(15): with which they encourage meaningful teacher contribution to staff meeting discussions.
- AH_{OA}(16): with which they satisfactorily explain their reasons for making important decisions that directly affect their respective teachers.

AH_{OA}(17): with which they encourage less aggressive teachers to express their opinions on major issues.

AH_{OA}(18): with which they use appropriately formal or informal verbal communication.

AH_{OA}(19): with which they encourage teachers to express opinions which differ from their own.

AH_{OA}(20): with which they make important announcements at the most appropriate times.

AH_{OB}: There is no significant difference in the communication activities of male and female elementary school principals, as revealed by the self-ascribed ratings of principals.

As revealed by the self-ascribed ratings of principals, there is no significant difference between male and female elementary school principals in the frequency:

AH_{OB}(1): of their written communication with teachers.

AH_{OB}(2): with which their written communication to teachers is clearly stated.

AH_{OB}(3): with which they select appropriate types of written communication.

AH_{OB}(4): with which they receive written communication from teachers.

AH_{OB}(5): with which they seek the personal opinion of individual teachers on school matters.

- AH_{OB}(6): with which they seem genuinely interested in knowing individual teachers' views on major school issues.
- AH_{OB}(7): with which they attempt to understand the rationale behind individual teachers' opinions on major school issues.
- AH_{OB}(8): with which they are sought out by individual teachers for discussion of school matters.
- AH_{OB}(9): with which they give complete attention to individual teachers who are speaking with them.
- AH_{OB}(10): with which they seem relaxed when talking with individual teachers.
- AH_{OB}(11): with which their teachers feel relaxed when talking to them.
- AH_{OB}(12): with which they effectively exchange information with their teachers at staff meetings.
- AH_{OB}(13): with which they express their ideas concisely at staff meetings.
- AH_{OB}(14): with which they mean exactly what they say.
- AH_{OB}(15): with which they encourage meaningful teacher contribution to staff meeting discussions.
- AH_{OB}(16): with which they satisfactorily explain their reasons for making important decisions that directly affect their respective teachers.
- AH_{OB}(17): with which they encourage less aggressive teachers to express their opinions on major issues.

AH_{OB}(18): with which they use appropriately formal or informal verbal communication.

AH_{OB}(19): with which they encourage teachers to express opinions which differ from their own.

AH_{OB}(20): with which they make important announcements at the most appropriate times.

AH_{OC}: There is no significant difference between the teacher-assigned ratings and the principals' self-ascribed ratings regarding principal communication activities.

There is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency:

AH_{OC}(1): of the principals' written communication with their respective teachers.

AH_{OC}(2): with which the principals' written communication to teachers is clearly stated.

AH_{OC}(3): with which principals select appropriate types of written communication.

AH_{OC}(4): with which principals receive written communication from their teachers.

AH_{OC}(5): with which principals seek the personal opinion of individual teachers on school matters.

AH_{OC}(6): with which principals seem genuinely interested in knowing individual teachers' views on major school issues.

AH_{OC}(7): with which principals attempt to understand the rationale behind individual teachers' opinions

on major school issues.

AH_{OC}(8): with which principals are sought out by individual teachers for discussion of school matters.

AH_{OC}(9): with which principals give complete attention to individual teachers who are speaking with them.

AH_{OC}(10): with which principals seem relaxed when talking with individual teachers.

AH_{OC}(11): with which teachers feel relaxed when talking to their principal.

AH_{OC}(12): with which principals effectively exchange information with their teachers at staff meetings.

AH_{OC}(13): with which principals express their ideas concisely at staff meetings.

AH_{OC}(14): with which principals mean exactly what they say.

AH_{OC}(15): with which principals encourage meaningful teacher contribution to staff meeting discussions.

AH_{OC}(16): with which principals satisfactorily explain their reasons for making important decisions.

AH_{OC}(17): with which principals encourage less aggressive teachers to express their opinions on major issues.

AH_{OC}(18): with which principals use appropriately formal or informal verbal communication.

AH_{OC}(19): with which principals encourage teachers to express opinions which differ from their own.

AH_{OC}(20): with which principals make important announcements at the most appropriate times.

VI. Summary

Various ideas have been advanced as to why there are proportionately fewer women than men in educational administration. Some opinions are based on more tangible "evidence," like unequal salaries or insufficient educational preparation. Other explanations have their foundation in less tangible "evidence," such as social norms, attitudes, expectations, and people's perceptions of women's roles.

This particular study addresses itself to the question of whether or not women have the requisite skills to handle traditionally male-occupied jobs. More particularly, this study is concerned with the vital administrative skill of communication and with the ability (or lack of it) of female elementary school principals to use that skill effectively.

Chapter III

Methodology

This chapter includes a discussion of: 1) the research methodology; 2) the procedures used in data collection; and 3) the statistical tests applied to the data.

The Test Instruments

1. Construction and description of the instruments. Two parallel Likert style opinionnaires, each the mirror-image of the other, were used to collect data for this study. Each opinionnaire contained 26 items, which respondents rated on a frequency scale of one to five, from "very seldom" to "very often". The 26 items were developed by this researcher on the basis of an existent communication rating scale created by Knower and Wagner (Dugan, 1967:73-75) and on the basis of a literature review pertaining to communication (see chapter II, pages 31-39).

The Knower and Wagner Administrative Communication Rating Scale is composed of "twenty-six questions constructed [sic] as to indicate a measure of communication of an administrator" (Dugan, 1967: 73). Because six items appeared to be particularly relevant to this study, they were adapted for use. Those six questions provided the framework for items 1, 3, 6, 9, 11, 12, 18, 19, 21, 22, 23, 24, and 25 on this researcher's mirror-image opinionnaires (see Appendix A).

The remaining thirteen opinionnaire items were formulated to reflect important aspects of communication which were mentioned repeatedly in the literature on communication, but which the researcher felt were not covered adequately in the Knower and Wagner test. Those important aspects concern semantics, attitudes, flexibility, and feedback.

The opinionnaire items were classified under the following headings: 1) written communication; 2) oral communication, one-to-one basis; 3) oral communication, staff meetings; 4) general style of communication; and 5) public address system (where applicable).

Each participating teacher indicated his opinion on each of the 26 opinionnaire items by circling a number, from one to five, which most closely corresponded to his perception of how frequently his principal performed various communication activities. The five frequency ratings were: 1) very seldom, 2) seldom, 3) occasionally, 4) often, and 5) very often.

Participating principals individually rated themselves on a second opinionnaire, the mirror-image of the teachers' opinionnaire, by circling the number (from one to five) which most closely corresponded to their individual perceptions of how frequently they performed various communication activities.

Each instrument included seven demographic questions and a section for any comments which the respondent wished to add regarding the principal's communication skills. The demographic information provided the basis for the classification of the data, for the purpose of testing hypotheses; the comments served to enhance the understanding of some test results.

2. Pilot. The questionnaires were distributed to a number of teachers and administrators enrolled in the course Educational Administration 511 at the University of Alberta during the spring of 1975. Two sets of revisions were made as a result of ensuing suggestions and comments. Following the second set of revisions, both questionnaires were submitted to Drs. A. G. Konrad, J. J. Bergen, and R. G. McIntosh for further critical examination. Final revisions were then effected.

A pilot test based on a segment of the population was not feasible since the number of female elementary school principals in the population was very small. Had such a pilot study been run, there would not have been enough female elementary school principals remaining to conduct the study itself.

3. Reliability. Reliability of a test is "a measure of the consistency with which the test procedure establishes the scores by which it differentiates among testees" (Rozeboom, 1966:375); it is "a statement of the error or precision of an estimate" (Spiegel, 1961:157). In other words, if one were to assess an individual not once, but several times, by the test, how closely would the test scores agree?

Because of the previously mentioned problem regarding a pilot study, reliability of the test instruments was difficult to determine.

4. Validity. Validity relates to "the adequacy with which a test . . . does, in fact, test what it is supposed to be testing"

(Rozeboom, 1966:187). Phrased another way, to what extent are variations in test scores accurate indicators of variations in the "real world" variables that one is seeking to measure?

In an effort to ensure validity of test results, the following steps were taken before analyzing respondents' scores: 1) statements 4 ("The principal gives the teachers only essential information.") and 22 ("The principal communicates in a formal manner.") were excluded from the analysis because these items seemed to generate confusion; several teacher-respondents placed question marks beside their number choices, and many left the items blank; 2) the three items pertaining to the use of a public address system were considered separately because not all principals were in schools equipped with such systems; and 3) a correlation test was run to establish whether or not there was a significant relationship between item 20 and each of the other questionnaire items. This third step was taken because item 20 was used in the study as an indicator of a principal's relative communication effectiveness; in effect, it constituted the basis of one of the variables controlled for - namely, the perceived communication effectiveness of principals. But, unlike the other seven variables (age category, sex, marital status, academic preparation, years teaching/administrative experience, years at present school, and school size), this variable was more subjective and less concrete in nature; thus, it was necessary to know whether or not respondents had a similar interpretation of item 20. Such knowledge was especially vital in light of the fact that item 20 alone was used in testing three of the hypotheses. Since effective communication (item 20) is comprised

of a number of components, among which are the communication activities listed in the other opinionnaire items, a significant correlation of item 20 with a substantial number of those communication activities (i.e. with the other opinionnaire items) would constitute one indication that teachers do indeed have a similar interpretation of item 20. A correlation is said to be significant if, after converting the value of r to z and then computing the standard error of z , z exceeds three times its standard error (Waugh, 1952: 474). With only two exceptions - namely, item 1 ("You receive written communication from the principal") and item 5 ("The principal receives written communication from you") - all items correlated significantly with item 20 (Table I).

Data Collection

1. The population. As can be seen in Table II, many elementary school principals were concentrated in k-7 and 1-7 schools; as a result, the population initially was defined as being all the principals in British Columbia's elementary schools with grade combinations of k-7 or 1-7. It was subsequently discovered, however, that 65 of British Columbia's 123 female elementary school principals (52.8 per cent) were really only head teachers in schools with three or fewer teachers; 28 of those 65 principals were located in k-7 and 1-7 schools. Since this study would not be particularly applicable to such small schools, the population parameters were re-defined to include all of British Columbia's elementary school principals in schools with four or more full-time teachers and with

TABLE I

Significant Correlation of Opinionnaire Items
with Item 20

Item	r	z	S. E. of z	3x S. E. of z	Sig. Correl.
1.	0.0976	0.09	.0498	.1494	no
2.	0.3153	0.32	.0498	.1494	yes
3.	0.3445	0.35	.0498	.1494	yes
5.	0.0442	0.04	.0498	.1494	no
6.	0.4245	0.45	.0498	.1494	yes
7.	0.5335	0.59	.0498	.1494	yes
8.	0.5974	0.68	.0498	.1494	yes
9.	0.4388	0.47	.0498	.1494	yes
10.	0.5612	0.63	.0498	.1494	yes
11.	0.5593	0.63	.0498	.1494	yes
12.	0.5807	0.66	.0498	.1494	yes
13.	0.6595	0.79	.0498	.1494	yes
14.	0.6159	0.71	.0498	.1494	yes
15.	0.6667	0.80	.0498	.1494	yes
16.	0.6813	0.83	.0498	.1494	yes
17.	0.7187	0.90	.0498	.1494	yes
18.	0.5569	0.62	.0498	.1494	yes
19.	0.6736	0.81	.0498	.1494	yes
21.	0.6655	0.80	.0498	.1494	yes
23.	0.6116	0.71	.0498	.1494	yes

TABLE II

1975-1976 Distribution of British Columbia's Elementary
School Principals in Schools with Grade Combinations
from k through, but not Exceeding, 7

Grade Combination	Male Principals	Female Principals	Undesignated
k	5	0	0
k-1	1	2	0
k-2	11	2	0
k-3	28	8	1
k-4	16	12	0
k-5	16	4	1
k-6	36	8	0
k-7	631	31	2
1	2	1	0
1-2	6	2	0
1-3	14	9	0
1-4	17	6	0
1-5	11	3	0
1-6	48	10	0
1-7	185	25	0
2-3	1	0	0
2-4	1	0	0
2-7	6	0	0
3-5	1	0	0
3-6	1	0	0
3-7	7	0	0
4-5	1	0	0
4-6	1	0	0
4-7	9	0	1
5-6	1	0	0
5-7	4	0	0
6-7	1	0	0
7	1	0	0
Totals	1062	123	5

any grade combination of k through, but not exceeding, 7. Given those parameters, the population consisted of 930 male and 58 female principals.

2. The sample. Two requirements had to be met before a principal was included in the sample: a) the principal had to complete one questionnaire, a self-evaluation of his own communication skills, and b) 45 per cent or more of that principal's teachers had to respond to the parallel questionnaire, an opinionnaire concerning their principal's communication skills. Although a 45 per cent usable return was arbitrarily defined as being representative of teacher opinion, in no case were fewer than three teacher responses accepted as being representative. Hence, if two out of four teachers from a given school responded, that school's principal would not be included in the sample, despite the fact that such a return represented 50 per cent of the teachers' opinions.

Initially, 87 male elementary school principals were randomly selected from the population of male elementary school principals in schools with grade combinations of k-7 or l-7, as listed in the 1974-1975 British Columbia schools list. Of the 87 male principals, 42 (48.2 per cent) responded. Four (9.5 per cent) of the returns were excluded from the sample because these returns came from principals of schools with fewer than four full-time teachers. Of the 38 principals in schools with four or more full-time teachers, 29 (76.3 per cent) met the second criterion concerning usable teacher returns. The newly issued 1975-1976 British Columbia schools list revealed that several of those principals' schools had been changed

from k-7 or 1-7 combinations to different grade combinations of k through 6. In light of the necessary modifications then being made to obtain a larger sample of female elementary school principals - modifications which are explained below - this change in grade combinations was regarded favorably, and the 29 male elementary school principals were deemed sufficient for the sample of male elementary school principals.

Initially, questionnaires were sent to the total population of female principals in k-7 and 1-7 schools. According to the 1974-1975 British Columbia's schools list, 56 female principals constituted that population. Twenty-seven (48.2 per cent) responded. Eighteen (66.6 per cent) of the returns were excluded from the sample because these returns came from principals of schools with fewer than four full-time teachers. Furthermore, three of the remaining nine female principals declined further participation; hence, a total of 21 of the 27 returns were, from the outset, unusable.

To obtain a reasonable number of female elementary school principals, then, the population parameters were broadened to include all female elementary school principals in schools with four or more full-time teachers and with any grade combination from k through, but not exceeding, 7. Having obtained a copy of the newly issued 1975-1976 British Columbia schools list, and having compiled a list of schools with fewer than four full-time teachers from information provided by the provincial Department of Education, 58 members of the above-defined population of female school principals were identified, a population which included the 6 female principals who already had agreed to participate. Twenty-six of the 58 (44.8

per cent) responded, but 5 (19.2 per cent) declined further participation. Of the 21 remaining respondents, 15 (71.4 per cent of the potential population) met the second requirement concerning usable teacher returns. Hence, only 15 of the 21 responding female principals could be included in this study.

3. Methods for data collection. On September 16, 1975, a packet of material was sent to each principal who was invited to participate in this study. The packet contained a letter which briefly explained the project, a copy of the teachers' questionnaire, and a copy of the principals' questionnaire. Principals who were willing to take part in this study completed the principals' questionnaire and returned it to the researcher in the enclosed postage paid envelope. Each principal also indicated how many teacher questionnaires were needed and designated an individual in the school to whom those questionnaires should be sent. Sets of teacher questionnaires were then mailed - with personal letters of explanation and appreciation - to the specified individuals. Appendix B contains copies of the above-mentioned correspondence.

4. Follow-up procedures. Follow-up letters were sent when either of the following circumstances arose: a) a female principal did not respond to the initial invitation to participate in this study; and b) fewer than 50 per cent of the teachers in a school had responded by two and a half to three weeks after the set of teacher questionnaires had been posted. In the latter case, several more teacher questionnaires were enclosed with the letter. This follow-up served as a reminder for teachers who had not yet found an oppor-

tunity to respond or who had misplaced the original questionnaire. In the case of several schools with female principals, a second letter was sent an additional two weeks later if fewer than 50 per cent of the teachers still had not responded. Such action was necessary to obtain a substantial number of female principals for this study.

5. Problems encountered in data collection. It should be noted from the outset that the methodology used in this study was influenced to some extent by two factors: a) Canada's nation-wide month and a half long postal strike and b) the low number of female elementary school principals in British Columbia. Before the postal strike began, 143 principals had been invited to participate in this study, and 63 (44 per cent) of them had responded. In addition, enough teachers had also responded from 31 of those 63 schools as to make those returns usable. Then the strike intervened, followed immediately by Christmas holidays, so that data gathering was effectively suspended for three months. But in January, 34 more principals were contacted and 17 of them agreed to participate. Teacher responses, however, were markedly diminished, so the final number of usable schools from this group of 34 was 9, or 26.5 per cent of the schools contacted after Christmas.

A second major difficulty related to the population of female elementary school principals in British Columbia. Excluding consideration of special schools (schools for the mentally retarded, etc.), there were only 123 female principals in schools with any grade combination from k through, but not exceeding, 7. This small

number stands in contrast to 1062 male principals in such schools (List of Schools . . ., 1975-1976). However, 65 of those 123 female principals (52.8 per cent) were in schools too small for inclusion in this study - that is, in schools with three or fewer teachers.

Treatment of the Data

The participants' responses were coded and recorded on data sheets; these coded sheets were then submitted to a keypunch operator at the University of Alberta for transfer onto IBM data cards. Most of the subsequent data processing was carried out on the University's computer.

By eliminating items 4 and 22 from the study (see the previous discussion on validity in this chapter), the incomplete returns with respect to these two items presented no problems.

1. Cross-tabulation. The purpose of having a cross-tabulation was to see how many respondents fell into the categories for each of the following variables: age, sex, marital status, educational preparation, years teaching experience (for teachers), years administrative experience (for principals), years in the present school, and school size. From the cross-tabulation information, the researcher determined which categories would need to be collapsed into larger units for testing purposes. Such collapsing was needed for educational preparation of both principals and teachers [categories three and four were combined (see Tables III and IV)], for marital status of principals and teachers [categories one and three

TABLE III

Numbers of Respondents in Subgroups - Principals

Variable	Variable Units	Male Principals N=29	Female Principals N=15
Age Category	1) 20-30	0	3
	2) 31-40	15	5
	3) 41-50	8	4
	4) above 50	6	3
Years Admin. Experience	1) 1-4 years	4	9
	2) 5-10 years	12	3
	3) above 10 years	13	3
Years at this School	1) 1-2 years	9	8
	2) 3-5 years	12	4
	3) 6-8 years	4	2
	4) above 8 years	4	1
Educational Preparation	1) 1-3 years	1	3
	2) BEd or equivalent	24	8
	3) MEd or equivalent	4	3
	4) additional beyond MEd	0	1
School Size by Full-Time Teachers	1) 4-8 teachers	6	7
	2) 9-14 teachers	10	5
	3) above 14 teachers	13	3
Marital Status	1) single	2	1
	2) married	27	12
	3) widowed/divorced	0	2

TABLE IV

Numbers of Respondents in Subgroups - Teachers

Variable	Variable Units	Teachers - N=362
Age Category	1) 20-30	176
	2) 31-40	99
	3) 41-50	53
	4) above 50	
Sex	1) Male	104
	2) Female	258
Years Teaching Experience	1) 1-4 years	121
	2) 5-9 years	113
	3) 10-15 years	68
	4) above 15 years	60
Years at this School	1) 1-2 years	182
	2) 3-5 years	98
	3) 6-8 years	44
	4) above 8 years	38
Educational Preparation	1) 1-3 years	135
	2) BEd or equivalent	207
	3) MEd or equivalent	17
	4) additional beyond MEd	3
School Size by Full-Time Teachers	1) 4-8 teachers	61
	2) 9-14 teachers	115
	3) above 14 teachers	186
Marital Status	1) single	81
	2) married	252
	3) widowed/divorced	29

were combined (see Tables III and IV)]], and for age categories of principals [categories one and two were combined (see Table III)]. In addition, teachers were grouped into four categories on the basis of teaching experience: a) those with one to four years, b) those with five to nine years, c) those with ten to fifteen years, and d) those with sixteen or more years. Principals were grouped into three categories on the basis of administrative experience: a) those with one to four years, b) those with five to ten years, and c) those with eleven or more years. Schools were grouped into three categories according to the numbers of full-time teachers on staff: a) small schools, those having four to eight teachers; b) medium schools, those having nine to fourteen teachers, and c) large schools, those having fifteen or more teachers.

2. Measurement level. The Likert scale is an ordinal measurement which assumes equidistance between categories on the scale. The opinionnaire used in this study utilizes a Likert scale, with the data represented in numerical form (i.e. the numbers 1, 2, 3, 4, and 5). According to Popham, it is considered acceptable to apply parametric statistical tests to ordinal data.

A number of empirical studies have demonstrated that, when parametric procedures have been employed with ordinal data, they rarely distort a relationship between variables which may be present in the data. More often than not, such parametric analysis results are nearly identical to those yielded by non-parametric procedures. Since the majority of data encountered in educational research probably falls somewhere between ordinal and interval strength, the educational researcher is usually on safe grounds when he applies parametric tests to numerical (ordinal or interval) data. This rule requires, of

course, that other assumptions of the particular parametric test have been satisfied (Popham, 1973:270).

3. T tests. The two-tailed t test of independent samples was used to test null hypotheses when only two groups were being compared. The t test assumes equality of variance (Ferguson, 1971:155), so to ensure there was homogeneity of variance, a one way classification of analysis of variance was used. In cases where there was a significant difference of variance, the Welch T' was computed, despite Ferguson's claim that "reasonably large departures from normality will not seriously affect the estimation of probabilities for a two-tailed t test" (1971:157). In all cases, the null hypotheses were rejected at the .05 level of significance.

4. F tests. For multiple comparisons the F test generally was used. However, where the comparisons involved unequal groups, the Scheffe method was subsequently employed since with that method "no special problems arise because of unequal n's" (Ferguson, 1971:271). The Scheffe method was selected because it is more rigorous than other multiple comparison tests with respect to Type I error, or to accepting H_1 when H_0 is true. Because there was frequently a gross disparity of variance, the rigorous nature of the Scheffe method was not felt to be a disadvantage; hence, Scheffe's suggestion of using a .10 level of significance instead of a .05 level (Ferguson, 1971:271) was not followed.

5. Chi square. To test the difference between an actual sample and another "hypothetical or previously established distribution," chi square is employed (Popham, 1973:284). Chi square was

used in this study to test for significant differences between expected and observed numbers of male and female principals in three categories of effective communicators (see chapter IV, page 69).

6. Criteria for rejection of null hypotheses. The first hypothesis and related three sub-hypotheses are concerned with only one item of the opinionnaire, item 20 - "The principal communicates effectively with the teachers." Any one of the three sub-hypotheses may be rejected if significant differences are found on item 20 between groups which are based on the variable of sex.

The second hypothesis, its related three sub-statements, and the sub-statements' respective sub-hypotheses are concerned with twenty other opinionnaire items; item number 20 will not be considered here. A sub-hypothesis may be rejected if significant differences are found on the corresponding opinionnaire item between groups which are based on the variable of sex.

Chapter IV

Testing the Hypotheses

I. The Effectiveness Hypotheses:

There is no significant difference in the communication effectiveness of male and female elementary school principals

Hypothesis EH_{OA}: There is no significant difference in the communication effectiveness of male and female elementary school principals, as perceived and rated by teachers.

1. Background. Opinionnaire item 20 ("The principal communicates effectively with the teachers") provided the mainspring for the examination of this hypothesis. Combining all teacher responses and controlling for each of the seven main variables (age category, sex, marital status, years teaching experience, years at this school, school size, and educational preparation), the researcher tested teacher responses to item 20. F tests were used for multiple comparisons (i.e. comparisons of age categories, years teaching experience, years at this school, school size, and educational preparation); t tests were used when only two subgroups were involved (i.e. comparisons related to sex and marital status). As is summarized in Table V, two significant differences were found: 1) there was a statistically significant difference between the responses of teachers in the 20-30 age category and teachers in the 31-40 age category, with the younger teachers assigning a lower mean

TABLE V

Comparison of Teacher Assigned Mean Scores on Item 20
 ("The Principal Communicates Effectively with the Teachers"):
 Seven Major Variable Groups

Variable	Variable Subgroup	N=362	\bar{X}	S.D.	Significant Difference
Age Category	1) 20-30	176	3.91	1.05	1-2, $p < .05$
	2) 31-40	99	4.26	0.83	
	3) 41-50	53	4.09	1.01	
	4) above 50	34	4.21	0.84	
Sex	1) male	104	4.19	0.79	n.s.
	2) female	258	4.01	1.04	
Marital Status	1) single, widowed, divorced	111	3.99	1.07	n.s.
	2) married	251	4.09	0.93	
Years Teaching Experience	1) 1-4	121	3.98	1.07	n.s.
	2) 5-9	113	4.11	0.90	
	3) 10-15	68	4.07	0.99	
	4) above 15	60	4.13	0.80	
Years at This School	1) 1-2	182	4.14	0.90	1-2, $p < .05$
	2) 3-5	98	3.84	1.14	
	3) above 5	82	4.17	0.90	
School Size by Full-Time Teachers	1) 4-8	63	4.23	1.07	n.s.
	2) 9-14	113	4.11	0.83	
	3) above 14	186	3.98	1.03	
Educational Preparation	1) 1-3 yrs.	134	4.07	0.92	n.s.
	2) BEd or equival.	208	4.04	1.02	
	3) MEd and beyond	20	4.15	0.88	

score to the principals; and 2) there was a significant difference in mean scores between teachers who had been at their present school from 1 to 2 years and teachers who had been at their present school from 3 to 5 years, with the teachers of longer tenure assigning a lower mean score.

2. Groupings. Since school size did not influence teacher responses significantly, an average score for item 20 was computed for the returns from each school and, as is shown in Table VI, schools were then grouped according to those scores into three categories: a) the top third, or schools with principals who henceforth shall be referred to as "more effective" communicators, b) the mid-third, or schools with principals who shall be called "moderately effective" communicators, and c) the bottom third, or schools with principals who shall be called "less effective" communicators. The first group contained 15 schools, 8 with female principals and 7 with male principals; the second group included 14 schools, 2 with female principals and 12 with male principals; the third group had 15 schools, 5 with female principals and 10 with male principals. Fifteen principals received mean scores of 4.5 or higher (on a 1 to 5 scale) as judged by their teachers on item 20 ("The principal communicates effectively with the teachers"); the average number of teachers in those schools was 9.9. Fourteen principals received mean scores ranging from 3.87 to 4.49 in schools having an average of 15.9 teachers. The lowest range of scores, 2.63 to 3.86, was assigned to 15 principals in schools having an average of 13.5 teachers. Results of a chi-square test indicated no significant

TABLE VI

Three Groupings of Principals on the Basis of Teacher Assigned Scores on Item 20 ("The Principal Communicates Effectively with the Teachers")

Group	Range of Mean Scores	Number of Male Princ.	Number of Female Princ.
"More Effective" Communicators	4.5 and above	7	8
"Moderately Effective" Communicators	3.87 to 4.49	12	2
"Less Effective" Communicators	3.86 and lower	10	5
Totals		29	15

differences between expected and observed numbers of male and female principals in each of the three groups.

3. T tests. Two-tailed t tests were used to compare responses to item 20 by the following groups: a) all teachers having male principals with all teachers having female principals; b) teachers having male principals rated as "more effective" communicators with teachers having female principals rated as "more effective" communicators; c) teachers having male principals rated as "moderately effective" communicators with teachers having female principals rated as "moderately effective" communicators; and d) teachers having male principals rated as "less effective" communicators with teachers having female principals rated as "less effective" communicators. As is shown in Table VII, no significant differences were found between any of the above paired groups.

4. Conclusion. There was a significant difference found between the mean ratings given to principals by teachers in the 20-30 age category and by teachers in the 31-40 age category on opinionnaire item 20. There was also a significant difference found between the mean ratings given to principals by teachers who had been at their present school from 1 to 2 years and by teachers who had been at their present school from 3 to 5 years. But those differences did not manifest themselves again in any of the tests where teachers were grouped according to the sex of their principal. Hence, null hypothesis EH_{0A} was accepted.

TABLE VII

Comparisons of Teacher Assigned Scores on Item 20
 ("The Principal Communicates Effectively with the Teachers"):
 Groups Based on the Sex of the Principal

Groups Compared	N	\bar{X}	S.D.	Signif. Diff.
All Teachers with Male Principals	247	4.00	0.95	n.s.
vs.				
All Teachers with Female Principals	115	4.19	1.00	
Teachers w/Male Princ. "More Effec." Communicators	47	4.72	0.45	n.s.
vs.				
Teachers w/Female Princ. "More Effec." Communicators	57	4.72	0.45	
Teachers w/Male Princ. "Moderately Effec." Communicators	110	4.20	0.64	n.s.
vs.				
Teachers w/Female Princ. "Moderately Effec." Communicators	21	4.24	0.75	
Teachers w/Male Princ. "Less Effective" Communicators	90	3.39	1.09	n.s.
vs.				
Teachers w/Female Princ. "Less Effec." Communicators	37	3.35	1.17	

Hypothesis EH_{OB} : There is no significant difference in the communication effectiveness of male and female elementary school principals, as revealed by the self-ascribed ratings of principals.

In seven different tests, principals were grouped together on the basis of the seven main variables. As is shown in Table VIII, no significant differences were found between groups for principals' self-ascribed ratings on item 20. And, as is shown in Table IX, no significant differences were found between the responses of male and female principals in the following groups: a) mean scores of male principals and female principals rated as "more effective" communicators; b) mean scores of male and female principals rated as "moderately effective" communicators; and c) mean scores of male and female principals rated as "less effective" communicators. Consequently, null hypothesis EH_{OB} was accepted.

Hypothesis EH_{OC} : There is no significant difference between the teacher-assigned ratings and the principals' self-ascribed ratings regarding principal communication effectiveness.

1. Totals. A t test of means, modified by the Welch T' adjustment, revealed no significant difference between the mean scores of all teachers and the mean scores of all principals on item 20 (Table X, 1).

2. Groupings. Two-tailed t tests were run on item 20 to

TABLE VIII

Comparison of Principals' Self-Ascribed Scores on Item 20
 ("The Principal Communicates Effectively with the Teachers"):
 Seven Major Variable Groups

Variable	Variable Subgroup	N	\bar{X}	S.D.	Sig. Diff.
Age Category	1) 20-40	23	4.13	0.46	n.s.
	2) 41-50	12	4.17	0.58	
	3) above 50	9	4.22	0.67	
Sex	1) male	29	4.10	0.56	n.s.
	2) female	15	4.27	0.46	
Marital Status	1) single, divorced, widowed	5	4.00	0.71	n.s.
	2) married	39	4.18	0.51	
Educational Preparation	1) 1-3 years	4	4.25	0.50	n.s.
	2) BEd or equiv.	32	4.09	0.53	
	3) MEd and beyond	8	4.38	0.52	
Years Admin. Experience	1) 1-4	13	4.08	0.28	n.s.
	2) 5-10	15	4.13	0.52	
	3) above 10	16	4.25	0.68	
School Size by Full-Time Teachers	1) 4-8	13	4.23	0.44	n.s.
	2) 9-14	15	4.13	0.64	
	3) above 14	16	4.13	0.50	
Years at This School	1) 1-2	17	4.00	0.35	n.s.
	2) 3-5	16	4.31	0.48	
	3) 6-8	6	4.33	0.52	
	4) above 8	5	4.00	1.00	

TABLE IX

Comparison of Principals' Self-Ascribed Scores on Item 20
 ("The Principal Communicates Effectively with the Teacher"):
 Communicator Effectiveness Groups

Groups	N	\bar{X}	S.D.	Sig. Diff.
Male Princ. "More Effect." Communicators	7	4.29	0.45	n.s.
vs. Female Princ. "More Effect." Communicators	8	4.13	0.33	
Male Princ. "Moderately Effect." Communicators	12	4.00	0.71	n.s.
vs. Female Princ. "Moderately Effect." Communicators	2	4.50	0.50	
Male Princ. "Less Effect." Communicators	10	4.10	0.30	n.s.
vs. Female Princ. "Less Effect." Communicators	5	4.40	0.49	

TABLE X

Nine Comparisons of Mean Scores on Item 20
 ("The Principal Communicates Effectively with the Teachers")

Compared Groups	N	\bar{X}	Sig. Diff.
1) All Teachers	362	4.06	
vs.			n.s.
All Principals	44	4.16	
2) All Teachers w/Male Princ.	247	4.00	
vs.			n.s.
All Male Principals	29	4.10	
3) All Teachers w/Female Princ.	115	4.19	
vs.			n.s.
All Female Principals	15	4.27	
4) Teachers w/Male Princ. - "More Effect." Communicators	47	4.72	
vs.			p < .05
Male Princ. - "More Effect." Communicators	7	4.29	
5) Teachers w/Female Princ. - "More Effect." Communicators	57	4.72	
vs.			p < .001
Female Princ. - "More Effect." Communicators	8	4.13	
6) Teachers w/Male Princ. - "Moder- ately Effect." Communicators	110	4.20	
vs.			n.s.
Male Princ. - "Moderately Effect." Communicators	12	4.00	
7) Teachers w/Female Princ. - "Mod- erately Effect." Communicators	21	4.24	
vs.			n.s.
Female Princ. - "Moderately Effect." Communicators	2	4.50	
8) Teachers w/Male Princ. - "Less Effect." Communicators	90	3.39	
vs.			p < .001
Male Princ. - "Less Effect." Communicators	10	4.10	
9) Teachers w/Female Princ. - "Less Effect." Communicators	37	3.35	
vs.			p < .01
Female Princ. - "Less Effect." Communicators	5	4.40	

compare mean scores of the following paired groups: a) all teachers with male principals against all male principals; b) all teachers with female principals against all female principals; c) teachers with male principals rated as "more effective" communicators against those principals themselves; d) teachers with female principals rated as "more effective" communicators against those same female principals; e) teachers with male principals rated as "moderately effective" principals against those male principals; f) teachers with female principals rated as "moderately effective" communicators against those same female principals; g) teachers with male principals rated as "less effective" communicators against those male principals; and h) teachers with female principals rated as "less effective" communicators against those female principals. There was a significant difference between the mean scores which teachers assigned to male principals in the "less effective" communicator category and the self-ascribed mean scores of those male principals, with the teachers rating the male principals significantly lower than the male principals rated themselves (See Table X, 8). Similarly, there was a significant difference between the mean ratings which teachers assigned to female principals in the "less effective" communicator category and the self-ascribed mean scores of those female principals, with the teachers' mean score being significantly lower than the self-ascribed mean score of the female principals (Table X, 9). On the other hand, there was a significant difference between the mean scores which teachers assigned to male principals in the "more effective" communicator category and the self-ascribed mean scores of those male principals, with the teachers assigning a significantly

higher score than the male principals did (Table X, 4). Also, there was a significant difference between the mean ratings teachers gave to female principals in the "more effective" communicator category and the self-ascribed mean scores of those female principals, with the teachers rating the female principals significantly higher than the female principals rated themselves (Table X, 5).

3. Difference of means. For each school in the sample, a "disparity score" was computed on item 20 by subtracting the teachers' mean score from their principal's self-ascribed rating. The object of this test was twofold: a) to establish how well the principals' perceptions on item 20 compared with the perceptions (mean rating) of their own teachers; and b) to determine whether or not male and female principals had a similar degree of perceptual agreement or disagreement on item 20 with their respective teachers. Principals were grouped on the basis of sex and two-tailed t tests were run to compare mean "disparity scores" of male and female principals. Four such tests were run: a) a test on the mean "disparity scores" of male and female principals rated as "more effective" communicators; b) a test on the scores of male and female principals rated as "moderately effective" communicators; c) a test on the scores of male and female principals rated as "less effective" communicators; and d) a test on the mean "disparity scores" of all male and all female principals. No significant differences were found between any of the four groups.

4. Conclusions. Results of the difference of means tests indicate substantial agreement in the perceptions or misperceptions

of male and female principals - as compared to their respective teachers' perceptions - on item 20.

Results of two-tailed t tests showed: a) no significant difference between the mean ratings which all teachers gave their male principals and the self-ascribed mean ratings of all male principals, and b) no significant difference between the mean scores which all teachers assigned to their female principals and the mean self-ascribed ratings of all female principals. However, these over-all comparisons obscured two factors concerning scores on item 20: a) there were significant differences between the mean self-ascribed ratings of principals (both male and female) in the "more effective" communicator category and the mean scores assigned by their teachers, and b) there were significant differences between the mean self-ascribed ratings of principals (both male and female) in the "less effective" communicator category and the mean scores given by their teachers. Unfortunately, there was a relatively small number of principals in the "more" and "less" effective communicator categories, so any generalizations made on the basis of these groupings must be made with caution. However, test results for this sample indicated significant differences in the above-mentioned groupings, and those differences pointed toward a rejection of hypothesis EH_{0C} ("There is no significant difference between the teacher-assigned ratings and the principals' self-ascribed ratings regarding principal communication effectiveness"). Table X (page 76) summarizes these findings.

II. The Activity Hypotheses:

There is no significant difference in the communication activities of male and female elementary school principals.

Analysis of Items Other Than Number 20

The following opinionnaire items are considered in the subsequent analysis. The items below are given in the form they appear on the questionnaire to teachers. The parallel items on the questionnaire to principals are shown in Appendix A.

Written Communication

1. You receive written communication from the principal.
2. Written communication from the principal is clearly stated.
3. The principal selects the type of written communication (memo, letter, etc.) which is most appropriate for each situation.
4. (Omitted as explained in chapter III, page 53)
5. The principal receives written communication from you.

Oral Communication: One-To-One Basis

6. The principal seeks your personal opinion on school matters.
7. The principal seems genuinely interested in knowing your views on major school issues.
8. The principal attempts to understand the rationale behind your opinions on major school issues.
9. You seek out the principal for discussion of school matters.
10. The principal gives complete attention to you while you are speaking with him.

11. The principal seems relaxed when talking with you.
12. You feel relaxed when talking with the principal.

Oral Communication: Staff Meetings

13. Teachers and principal effectively exchange information at staff meetings.
14. The principal expresses his ideas concisely at staff meetings.
15. The principal means exactly what he says.
16. The principal encourages meaningful teacher-contribution to staff meeting discussions.
17. The principal satisfactorily explains his reasons for making important decisions that directly affect teachers.
18. The principal encourages less aggressive teachers to express their opinions on major issues.

General Style of Communication

19. In communicating verbally, the principal adapts the degree of formality or informality to suit each situation.
20. (not considered in this section)
21. The principal encourages teachers to express opinions which differ from his own.
22. (Omitted as explained in chapter III, page 53)
23. The principal makes important announcements at the most appropriate times.

The tables that follow identify the item by number only. In the text, an abbreviated form of the item description is given in parenthesis whenever this appears to be useful in clarifying a reference made to a specific item.

Statement AH_{OA}: There is no significant difference in the communication activities of male and female elementary school principals, as perceived and rated by teachers.

1. Controlling for the seven main variables. To control for each of the seven variables, teacher responses either were subjected to a two-tailed t test, if only two subgroups were compared (i.e. marital status and sex), or to an F test, if more than two subgroups were compared (i.e. years teaching experience, academic preparation, age category, years at present school, and school size). There were no significant differences found among subgroups in three of the variable categories - marital status, years teaching experience, and academic preparation. These findings are listed in Tables XI, XII, and XIII.

(A) Age category. There was a significant difference between mean ratings of teachers in the 20-30 age category and teachers in the 31-40 age category on item 17 (Principal explains reasons for decisions), with the younger teachers giving the principals the lower mean rating. Table XIV provides the mean scores for all items in this category.

(B) Years at present school. As is shown in Table XV, teachers who had been at the school from 3 to 5 years gave a significantly lower mean rating to principals than did either a) teachers who had been at the school fewer than 3 years, or b) teachers who had been at the school more than 5 years on item 14 (concise expression of ideas) and on item 15 (means what he says).

TABLE XI

Comparison of Teacher Assigned Mean Scores on the Principals'
Communication Activities: Marital Status

Item #	Single \bar{X}	Single S.D.	Married \bar{X}	Married S.D.	Signif. Diff.
1.	2.97	1.30	3.14	1.20	n.s.
2.	4.14	1.17	4.34	0.94	n.s.
3.	4.09	1.21	4.14	1.08	n.s.
5.	2.08	1.01	2.18	1.12	n.s.
6.	3.39	1.29	3.54	1.13	n.s.
7.	3.75	1.38	3.80	1.18	n.s.
8.	3.76	1.28	3.81	1.16	n.s.
9.	3.88	1.10	3.76	1.00	n.s.
10.	4.33	0.92	4.37	0.87	n.s.
11.	4.43	0.84	4.40	0.83	n.s.
12.	4.21	0.92	4.33	0.87	n.s.
13.	4.10	0.95	4.18	0.93	n.s.
14.	4.11	1.08	4.21	0.95	n.s.
15.	4.09	1.15	4.16	0.95	n.s.
16.	4.28	1.00	4.26	0.95	n.s.
17.	4.18	1.05	4.20	0.95	n.s.
18.	3.26	1.29	3.32	1.17	n.s.
19.	4.15	0.94	4.16	0.86	n.s.
21.	3.71	1.16	3.70	1.06	n.s.
23.	3.85	0.98	3.98	0.92	n.s.

TABLE XII

Comparison of Teacher Assigned Mean Scores on the Principals' Communication Activities: Years Teaching Experience

Item #	Subgroup	N	\bar{X}	S.D.	Sig. Diff.
1.	1) 1-4 years	121	3.09	1.20	n.s.
	2) 5-9 years	113	3.07	1.28	
	3) 10-15 years	68	3.18	1.18	
	4) 16 + years	60	3.00	1.25	
2.	1) 1-4 years	121	4.13	1.13	n.s.
	2) 5-9 years	113	4.51	0.77	
	3) 10-15 years	68	4.18	1.06	
	4) 16 + years	60	4.23	1.02	
3.	1) 1-4 years	121	3.98	1.23	n.s.
	2) 5-9 years	113	4.35	0.89	
	3) 10-15 years	68	4.13	1.09	
	4) 16 + years	60	4.01	1.26	
5.	1) 1-4 years	121	2.12	1.03	n.s.
	2) 5-9 years	113	2.19	1.17	
	3) 10-15 years	68	2.13	1.14	
	4) 16 + years	60	2.13	0.99	
6.	1) 1-4 years	121	3.41	1.23	n.s.
	2) 5-9 years	113	3.57	1.21	
	3) 10-15 years	68	3.62	1.11	
	4) 16 + years	60	3.42	1.11	
7.	1) 1-4 years	121	3.74	1.30	n.s.
	2) 5-9 years	113	3.86	1.23	
	3) 10-15 years	68	3.75	1.24	
	4) 16 + years	60	3.82	1.16	
8.	1) 1-4 years	121	3.73	1.23	n.s.
	2) 5-9 years	113	3.88	1.14	
	3) 10-15 years	68	3.88	1.22	
	4) 16 + years	60	3.70	1.20	
9.	1) 1-4 years	121	3.73	1.10	n.s.
	2) 5-9 years	113	3.94	1.03	
	3) 10-15 years	68	3.84	0.94	
	4) 16 + years	60	3.65	0.99	
10.	1) 1-4 years	121	4.26	0.88	n.s.
	2) 5-9 years	113	4.40	0.88	
	3) 10-15 years	68	4.47	0.85	
	4) 16 + years	60	4.37	0.92	

TABLE XII
(Cont'd.)

Item #	Subgroup	N	\bar{X}	S.D.	Sig. Diff.
11.	1) 1-4 years	121	4.36	0.78	n.s.
	2) 5-9 years	113	4.44	0.83	
	3) 10-15 years	68	4.47	0.80	
	4) 16 + years	60	4.38	0.96	
12.	1) 1-4 years	121	4.24	0.85	n.s.
	2) 5-9 years	113	4.27	0.85	
	3) 10-15 years	68	4.38	0.86	
	4) 16 + years	60	4.33	1.04	
13.	1) 1-4 years	121	4.04	1.06	n.s.
	2) 5-9 years	113	4.27	0.81	
	3) 10-15 years	68	4.25	0.95	
	4) 16 + years	60	4.07	0.84	
14.	1) 1-4 years	121	3.98	1.13	n.s.
	2) 5-9 years	113	4.19	0.94	
	3) 10-15 years	68	4.33	0.91	
	4) 16 + years	60	4.40	0.69	
15.	1) 1-4 years	121	4.04	1.03	n.s.
	2) 5-9 years	113	4.12	1.05	
	3) 10-15 years	68	4.28	0.99	
	4) 16 + years	60	4.23	0.92	
16.	1) 1-4 years	121	4.22	1.00	n.s.
	2) 5-9 years	113	4.32	0.88	
	3) 10-15 years	68	4.29	1.02	
	4) 16 + years	60	4.23	0.98	
17.	1) 1-4 years	121	4.12	0.99	n.s.
	2) 5-9 years	113	4.20	0.90	
	3) 10-15 years	68	4.28	1.05	
	4) 16 + years	60	4.25	1.04	
18.	1) 1-4 years	121	3.19	1.27	n.s.
	2) 5-9 years	113	3.34	1.11	
	3) 10-15 years	68	3.28	1.31	
	4) 16 + years	60	3.50	1.11	
19.	1) 1-4 years	121	4.10	0.93	n.s.
	2) 5-9 years	113	4.25	0.85	
	3) 10-15 years	68	4.06	0.91	
	4) 16 + years	60	4.22	0.83	

TABLE XII
(Cont'd.)

Item #	Subgroup	N	\bar{X}	S.D.	Sig. Diff.
21.	1) 1-4 years	121	3.62	1.12	n.s.
	2) 5-9 years	113	3.78	1.02	
	3) 10-15 years	68	3.69	1.25	
	4) 16 + years	60	3.77	0.95	
23.	1) 1-4 years	121	3.80	0.99	n.s.
	2) 5-9 years	113	4.00	0.97	
	3) 10-15 years	68	4.07	0.82	
	4) 16 + years	60	3.92	0.89	

TABLE XIII

Comparison of Teacher Assigned Mean Scores on the Principals'
Communication Activities: Academic Background

Item #	Subgroup	N	\bar{X}	S.D.	Sig. Diff.
1.	1) 1-3 years	134	3.22	1.29	n.s.
	2) BEd	208	3.02	1.19	
	3) MEd +	20	2.85	1.23	
2.	1) 1-3 years	134	4.33	0.95	n.s.
	2) BEd	208	4.27	1.00	
	3) MEd +	20	3.90	1.52	
3.	1) 1-3 years	134	4.20	1.07	n.s.
	2) BEd	208	4.11	1.13	
	3) MEd +	20	3.70	1.34	
5.	1) 1-3 years	134	2.08	1.11	n.s.
	2) BEd	208	2.19	1.09	
	3) MEd +	20	2.10	1.02	
6.	1) 1-3 years	134	3.49	1.14	n.s.
	2) BEd	208	3.49	1.20	
	3) MEd +	20	3.60	1.31	
7.	1) 1-3 years	134	3.80	1.17	n.s.
	2) BEd	208	3.77	1.29	
	3) MEd +	20	3.85	1.23	
8.	1) 1-3 years	134	3.83	1.13	n.s.
	2) BEd	208	3.78	1.24	
	3) MEd +	20	3.70	1.26	
9.	1) 1-3 years	134	3.78	0.96	n.s.
	2) BEd	208	3.82	1.06	
	3) MEd +	20	3.70	1.26	
10.	1) 1-3 years	134	4.38	0.88	n.s.
	2) BEd	208	4.36	0.83	
	3) MEd +	20	4.15	1.39	
11.	1) 1-3 years	134	4.42	0.83	n.s.
	2) BEd	208	4.39	0.79	
	3) MEd +	20	4.45	1.19	
12.	1) 1-3 years	134	4.25	0.99	n.s.
	2) BEd	208	4.31	0.76	
	3) MEd +	20	4.45	1.23	

TABLE XIII
(Cont'd.)

Item #	Subgroup	N	\bar{X}	S.D.	Sig. Diff.
13.	1) 1-3 years	134	4.16	0.89	n.s.
	2) BEd	208	4.15	0.96	
	3) MEd +	20	4.15	0.99	
14.	1) 1-3 years	134	4.15	1.01	n.s.
	2) BEd	208	4.18	0.97	
	3) MEd +	20	4.50	1.00	
15.	1) 1-3 years	134	4.14	0.94	n.s.
	2) BEd	208	4.11	1.08	
	3) MEd +	20	4.40	0.75	
16.	1) 1-3 years	134	4.31	0.89	n.s.
	2) BEd	208	4.21	1.00	
	3) MEd +	20	4.55	1.00	
17.	1) 1-3 years	134	4.19	0.93	n.s.
	2) BEd	208	4.18	1.01	
	3) MEd +	20	4.30	1.03	
18.	1) 1-3 years	134	3.42	1.11	n.s.
	2) BEd	208	3.24	1.27	
	3) MEd +	20	3.20	1.15	
19.	1) 1-3 years	134	4.15	0.91	n.s.
	2) BEd	208	4.14	0.87	
	3) MEd +	20	4.30	0.80	
21.	1) 1-3 years	134	3.73	1.08	n.s.
	2) BEd	208	3.67	1.08	
	3) MEd +	20	3.95	1.19	
23.	1) 1-3 years	134	3.96	0.91	n.s.
	2) BEd	208	3.91	0.95	
	3) MEd +	20	4.05	0.99	

TABLE XIV

Comparison of Teacher Assigned Mean Scores on the Principals' Communication Activities: Age Category

Item #	Subgroup	N	\bar{X}	S.D.	Sig. Diff.
1.	1) 20-30	176	3.12	1.25	n.s.
	2) 31-40	99	3.13	1.21	
	3) 41-50	53	2.98	1.28	
	4) above 50	34	2.94	1.27	
2.	1) 20-30	176	4.19	1.09	n.s.
	2) 31-40	99	4.37	0.98	
	3) 41-50	53	4.36	0.81	
	4) above 50	34	4.29	1.06	
3.	1) 20-30	176	4.03	1.16	n.s.
	2) 31-40	99	4.25	1.03	
	3) 41-50	53	4.15	1.06	
	4) above 50	34	4.13	1.23	
5.	1) 20-30	176	2.20	1.13	n.s.
	2) 31-40	99	2.09	1.04	
	3) 41-50	53	1.92	0.96	
	4) above 50	34	2.35	1.18	
6.	1) 20-30	176	3.40	1.24	n.s.
	2) 31-40	99	3.65	1.20	
	3) 41-50	53	3.55	1.07	
	4) above 50	34	3.50	0.96	
7.	1) 20-30	176	3.72	1.30	n.s.
	2) 31-40	99	3.89	1.22	
	3) 41-50	53	3.80	1.13	
	4) above 50	34	3.88	1.15	
8.	1) 20-30	176	3.72	1.24	n.s.
	2) 31-40	99	3.96	1.14	
	3) 41-50	53	3.74	1.21	
	4) above 50	34	3.85	1.05	
9.	1) 20-30	176	3.76	1.08	n.s.
	2) 31-40	99	4.02	0.91	
	3) 41-50	53	3.58	1.03	
	4) above 50	34	3.74	1.05	
10.	1) 20-30	176	4.27	0.92	n.s.
	2) 31-40	99	4.52	0.77	
	3) 41-50	53	4.26	1.00	
	4) above 50	34	4.53	0.70	
11.	1) 20-30	176	4.32	0.86	n.s.
	2) 31-40	99	4.59	0.64	
	3) 41-50	53	4.26	1.06	
	4) above 50	34	4.59	0.66	

TABLE XIV
(Cont'd.)

Item #	Subgroup	N	\bar{X}	S.D.	Sig. Diff.
12.	1) 20-30	176	4.20	0.84	n.s.
	2) 31-40	99	4.44	0.80	
	3) 41-50	53	4.11	1.19	
	4) above 50	34	4.59	0.61	
13.	1) 20-30	176	4.04	1.00	n.s.
	2) 31-40	99	4.34	0.84	
	3) 41-50	53	4.25	0.90	
	4) above 50	34	4.06	0.81	
14.	1) 20-30	176	3.95	1.13	n.s.
	2) 31-40	99	4.50	0.63	
	3) 41-50	53	4.32	0.92	
	4) above 50	34	4.21	0.88	
15.	1) 20-30	176	3.96	1.09	n.s.
	2) 31-40	99	4.37	0.85	
	3) 41-50	53	4.17	1.01	
	4) above 50	34	4.38	0.85	
16.	1) 20-30	176	4.15	1.01	n.s.
	2) 31-40	99	4.44	0.85	
	3) 41-50	53	4.32	0.98	
	4) above 50	34	4.29	0.97	
17.	1) 20-30	176	4.02	0.99	1-2, $p < .05$
	2) 31-40	99	4.43	0.86	
	3) 41-50	53	4.28	0.99	
	4) above 50	34	4.24	1.10	
18.	1) 20-30	176	3.15	1.22	n.s.
	2) 31-40	99	3.40	1.24	
	3) 41-50	53	3.55	1.01	
	4) above 50	34	3.44	1.24	
19.	1) 20-30	176	4.07	0.97	n.s.
	2) 31-40	99	4.30	0.75	
	3) 41-50	53	4.08	0.92	
	4) above 50	34	4.29	0.68	
21.	1) 20-30	176	3.62	1.11	n.s.
	2) 31-40	99	3.74	1.10	
	3) 41-50	53	3.75	1.09	
	4) above 50	34	4.00	0.85	
23.	1) 20-30	176	3.80	1.01	n.s.
	2) 31-40	99	4.11	0.82	
	3) 41-50	53	3.98	0.87	
	4) above 50	34	4.09	0.87	

TABLE XV

Comparison of Teacher Assigned Mean Scores on the Principals'
Communication Activities: Years at Present School

Item #	Subgroup	N	\bar{X}	S.D.	Sig. Diff.
1.	1) 1-2 years	182	3.05	1.21	n.s.
	2) 3-5 years	98	3.03	1.21	
	3) 6 + years	82	3.23	1.28	
2.	1) 1-2 years	182	4.30	1.07	n.s.
	2) 3-5 years	98	4.20	0.91	
	3) 6 + years	82	4.32	1.03	
3.	1) 1-2 years	182	4.21	1.10	n.s.
	2) 3-5 years	98	3.91	1.11	
	3) 6 + years	82	4.21	1.15	
5.	1) 1-2 years	182	2.07	1.08	n.s.
	2) 3-5 years	98	2.15	1.15	
	3) 6 + years	82	2.30	1.04	
6.	1) 1-2 years	182	3.56	1.16	n.s.
	2) 3-5 years	98	3.49	1.25	
	3) 6 + years	82	3.37	1.15	
7.	1) 1-2 years	182	3.90	1.20	n.s.
	2) 3-5 years	98	3.77	1.29	
	3) 6 + years	82	3.59	1.25	
8.	1) 1-2 years	182	3.90	1.15	n.s.
	2) 3-5 years	98	3.71	1.28	
	3) 6 + years	82	3.67	1.19	
9.	1) 1-2 years	182	3.85	1.07	n.s.
	2) 3-5 years	98	3.77	1.06	
	3) 6 + years	82	3.73	0.92	
10.	1) 1-2 years	182	4.43	0.71	n.s.
	2) 3-5 years	98	4.26	1.06	
	3) 6 + years	82	4.32	0.99	
11.	1) 1-2 years	182	4.48	0.65	n.s.
	2) 3-5 years	98	4.33	1.01	
	3) 6 + years	82	4.34	0.93	
12.	1) 1-2 years	182	4.35	0.79	n.s.
	2) 3-5 years	98	4.23	0.95	
	3) 6 + years	82	4.24	0.99	
13.	1) 1-2 years	182	4.24	0.88	n.s.
	2) 3-5 years	98	4.01	1.06	
	3) 6 + years	82	4.15	0.89	

TABLE XV
(Cont'd.)

Item #	Subgroup	N	\bar{X}	S.D.	Sig. Diff.
14.	1) 1-2 years	182	4.25	0.94	1-2, $p < .05$
	2) 3-5 years	98	3.94	1.15	3-2, $p < .05$
	3) 6 + years	82	4.32	0.84	
15.	1) 1-2 years	182	4.29	0.86	1-2, $p < .01$
	2) 3-5 years	98	3.83	1.21	3-2, $p < .05$
	3) 6 + years	82	4.21	1.00	
16.	1) 1-2 years	182	4.31	0.89	n.s.
	2) 3-5 years	98	4.24	1.08	
	3) 6 + years	82	4.21	0.98	
17.	1) 1-2 years	182	4.29	0.87	n.s.
	2) 3-5 years	98	4.00	1.13	
	3) 6 + years	82	4.21	0.99	
18.	1) 1-2 years	182	3.39	1.19	n.s.
	2) 3-5 years	98	3.14	1.25	
	3) 6 + years	82	3.30	1.18	
19.	1) 1-2 years	182	4.18	0.87	n.s.
	2) 3-5 years	98	4.08	0.95	
	3) 6 + years	82	4.21	0.84	
21.	1) 1-2 years	182	3.77	1.07	n.s.
	2) 3-5 years	98	3.60	1.15	
	3) 6 + years	82	3.70	1.06	
23.	1) 1-2 years	182	4.06	0.82	n.s.
	2) 3-5 years	98	3.70	1.06	
	3) 6 + years	82	3.95	0.98	

(C) School Size. There was a significant difference between mean scores assigned to principals by teachers in small schools and those of teachers in medium-sized schools on item 1 (frequency of written communication), with the mean score assigned by teachers in small schools being significantly lower than that of teachers in medium-sized schools. There were also significant differences between mean scores of teachers in small schools and those of teachers in medium-sized schools on item 13 (effective exchange of information at staff meetings) and on item 18 (principal encourages less aggressive teachers), with the mean scores of teachers in medium-sized schools being significantly lower than those of teachers in small schools on both items.

Teachers in small and large schools differed significantly on item 6 (principal seeks individual teachers' opinions), item 7 (principal seems interested in your views), item 8 (principal attempts to understand rationale behind your opinions), item 9 (you seek out the principal), item 13 (effective exchange of information at staff meetings), item 14 (concise expression of ideas), item 16 (principal encourages teacher-contribution to discussions), item 17 (principal explains reasons for decisions), and item 18 (principal encourages less aggressive teachers). In all cases, the mean scores of teachers in small schools were significantly higher than those of teachers in large schools.

Table XVI summarizes significant differences found in this category.

TABLE XVI

Comparison of Teacher Assigned Mean Scores on the Principals' Communication Activities: School Size

Item #	Subgroup	N	\bar{X}	S.D.	Significant Difference
1.	1) small	63	2.69	1.38	1-2, $p < .01$
	2) medium	113	3.35	1.12	
	3) large	186	3.06	1.21	
2.	1) small	63	4.10	1.19	n.s.
	2) medium	113	4.33	0.80	
	3) large	186	4.30	1.08	
3.	1) small	63	4.00	1.24	n.s.
	2) medium	113	4.34	0.87	
	3) large	186	4.04	1.20	
5.	1) small	63	1.93	0.98	n.s.
	2) medium	113	2.23	1.17	
	3) large	186	2.16	1.07	
6.	1) small	63	3.84	1.17	1-3, $p < .05$
	2) medium	113	3.63	1.17	
	3) large	186	3.31	1.17	
7.	1) small	63	4.23	1.09	1-3, $p < .01$
	2) medium	113	3.81	1.16	
	3) large	186	3.65	1.30	
8.	1) small	63	4.15	1.14	1-3, $p < .05$
	2) medium	113	3.84	1.11	
	3) large	186	3.66	1.25	
9.	1) small	63	4.21	0.86	1-3, $p < .001$
	2) medium	113	3.88	1.01	
	3) large	186	3.62	1.06	
10.	1) small	63	4.46	0.70	n.s.
	2) medium	113	4.35	0.74	
	3) large	186	4.34	1.01	
11.	1) small	63	4.57	0.62	n.s.
	2) medium	113	4.35	0.82	
	3) large	186	4.39	0.90	
12.	1) small	63	4.39	0.76	n.s.
	2) medium	113	4.35	0.79	
	3) large	186	4.24	0.97	
13.	1) small	63	4.57	0.72	1-2, $p < .05$ 1-3, $p < .001$
	2) medium	113	4.17	0.91	
	3) large	186	4.02	0.98	

TABLE XVI
(Cont'd.)

Item #	Subgroup*	N	\bar{X}	S.D.	Significant Difference
14.	1) small	63	4.48	0.72	1-3, $p < .05$
	2) medium	113	4.17	0.91	
	3) large	186	4.10	1.09	
15.	1) small	63	4.43	0.81	n.s.
	2) medium	113	4.09	0.93	
	3) large	186	4.10	1.10	
16.	1) small	63	4.62	0.71	1-3, $p < .01$
	2) medium	113	4.27	0.94	
	3) large	186	4.15	1.02	
17.	1) small	63	4.48	0.79	1-3, $p < .05$
	2) medium	113	4.22	0.88	
	3) large	186	4.10	1.07	
18.	1) small	63	3.85	1.11	1-2, $p < .05$
	2) medium	113	3.37	1.30	1-3, $p < .001$
	3) large	186	3.09	1.12	
19.	1) small	63	4.34	0.79	n.s.
	2) medium	113	4.15	0.89	
	3) large	186	4.10	0.91	
21.	1) small	63	3.93	1.11	n.s.
	2) medium	113	3.68	1.05	
	3) large	186	3.66	1.10	
23.	1) small	63	4.02	0.92	n.s.
	2) medium	113	3.96	0.91	
	3) large	186	3.91	0.96	

* small = 4-8 full-time teachers
medium = 9-14 full-time teachers
large = 15 or more full-time teachers

2. Groupings on the basis of the principals' sex.

(A) Mean scores of all teachers with male principals versus mean scores of all teachers with female principals. The mean score assigned by teachers to male principals was significantly higher than the mean score assigned by teachers to female principals on item 1 (frequency of written communication) and on item 5 (principal receives written communication from you).

The mean scores teachers gave to female principals was significantly higher than the mean scores teachers assigned to male principals on item 6 (principal seeks individual teachers' opinions), item 7 (principal seems interested in your views), item 8 (principal attempts to understand rationale behind your opinions), item 13 (effective exchange of information at staff meetings), item 16 (principal encourages teacher-contribution to discussions), item 17 (principal explains reasons for decisions), item 18 (principal encourages less aggressive teachers), and item 21 (principal encourages differing opinions). A summary of results is shown in Table XVII.

(B) Mean scores of teachers with male principals rated as "more effective" communicators versus mean scores of teachers with female principals rated as "more effective" communicators. There was a significant difference between mean scores that teachers assigned to male principals and mean scores that teachers assigned to female principals on item 1 (frequency of written communication), item 2 (written communication is clearly stated), item 3 (principal selects appropriate type of written communication), and on item 5 (principal receives written communication from you). Male principals received mean scores which were significantly higher than those received by

TABLE XVII

Comparison of Teacher Assigned Mean Scores on the Principals' Communication Activities: All Male (N=29) vs. All Female (N=15) Principals

Item #	Subgroup - Teachers with:	N	\bar{X}	S.D.	Significant Difference
1.	1) Male Princ. 2) Female Princ.	247 115	3.21 2.81	1.23 1.18	$p < .01$
2.	1) Male Princ. 2) Female Princ.	247 115	4.29 4.24	0.98 1.09	n.s.
3.	1) Male Princ. 2) Female Princ.	247 115	4.15 4.09	1.05 1.24	n.s.
5.	1) Male Princ. 2) Female Princ.	247 115	2.23 1.96	1.11 1.02	$p < .05$
6.	1) Male Princ. 2) Female Princ.	247 115	3.38 3.74	1.18 1.15	$p < .01$
7.	1) Male Princ. 2) Female Princ.	247 115	3.68 4.03	1.26 1.16	$p < .05$
8.	1) Male Princ. 2) Female Princ.	247 115	3.71 3.99	1.22 1.11	$p < .05$
9.	1) Male Princ. 2) Female Princ.	247 115	3.74 3.93	1.03 1.03	n.s.
10.	1) Male Princ. 2) Female Princ.	247 115	4.35 4.37	0.86 0.93	n.s.
11.	1) Male Princ. 2) Female Princ.	247 115	4.42 4.39	0.79 0.91	n.s.
12.	1) Male Princ. 2) Female Princ.	247 115	4.29 4.30	0.86 0.92	n.s.
13.	1) Male Princ. 2) Female Princ.	247 115	4.08 4.31	0.91 0.95	$p < .05$
14.	1) Male Princ. 2) Female Princ.	247 115	4.14 4.27	0.99 0.98	n.s.
15.	1) Male Princ. 2) Female Princ.	247 115	4.07 4.30	1.01 1.00	n.s.
16.	1) Male Princ. 2) Female Princ.	247 115	4.19 4.44	0.94 0.99	$p < .05$

TABLE XVII
(Cont'd.)

Item #	Subgroup - Teachers with:	N	\bar{X}	S.D.	Significant Difference
17.	1) Male Princ.	247	4.08	1.01	$p < .001$
	2) Female Princ.	115	4.44	0.86	
18.	1) Male Princ.	247	3.18	1.20	$p < .01$
	2) Female Princ.	115	3.57	1.17	
19.	1) Male Princ.	247	4.12	0.84	n.s.
	2) Female Princ.	115	4.24	0.97	
21.	1) Male Princ.	247	3.57	1.08	$p < .001$
	2) Female Princ.	115	4.01	1.03	
23.	1) Male Princ.	247	3.91	0.87	n.s.
	2) Female Princ.	115	4.01	1.06	

female principals. A summary of results is shown in Table XVIII.

(C) Mean scores of teachers with male principals rated as "moderately effective" communicators versus mean scores of teachers with female principals rated as "moderately effective" communicators. No significant differences were found on any of the items, but, as there were only two female principals in this category, these results may not be generalizable.

(D) Mean scores of teachers with male principals rated as "less effective" communicators versus mean scores of teachers with female principals rated as "less effective" communicators. No significant differences were found on any of the items.

3. Conclusions. Variable categories of school size, years at present school, and/or age group seemed to be associated with significant differences found between the communication activities of male principals and the communication activities of female principals on items 1, 6, 7, 8, 13, 16, 17, and 18. But of the seven variables which were examined, the principals' sex alone seemed to account for significant differences found for all principals on items 5 and 21; it seemed to account for significant differences found on items 2 and 3 for principals rated as "more effective" communicators. These findings are summarized in Table XIX. The significant difference found on item 5 (principal receives written communication from you) led to the rejection of sub-hypothesis $AH_{OA}(4)$ ("As perceived and rated by teachers, there is no significant difference between male and female elementary school principals in the frequency with which they receive written communication from teachers");

TABLE XVIII

Comparison of Teacher Assigned Mean Scores on the Principals' Communication Activities: "More Effective" Communicators - Male (N=7) vs. Female (N=8) Principals

Item #	Subgroup - Teachers with:	N	\bar{X}	S.D.	Significant Difference
1.	1) Male Princ. 2) Female Princ.	47 57	3.49 2.47	1.07 1.19	$p < .001$
2.	1) Male Princ. 2) Female Princ.	47 57	4.74 4.25	0.70 1.20	$p < .05$
3.	1) Male Princ. 2) Female Princ.	47 57	4.64 4.21	0.81 1.27	$p < .05$
5.	1) Male Princ. 2) Female Princ.	47 57	2.57 1.88	1.14 0.96	$p < .001$
6.	1) Male Princ. 2) Female Princ.	47 57	3.87 4.11	1.00 1.09	n.s.
7.	1) Male Princ. 2) Female Princ.	47 57	4.51 4.51	0.87 0.86	n.s.
8.	1) Male Princ. 2) Female Princ.	47 57	4.51 4.49	0.87 0.80	n.s.
9.	1) Male Princ. 2) Female Princ.	47 57	4.30 4.23	0.85 0.90	n.s.
10.	1) Male Princ. 2) Female Princ.	47 57	4.79 4.74	0.41 0.51	n.s.
11.	1) Male Princ. 2) Female Princ.	47 57	4.77 4.74	0.47 0.44	n.s.
12.	1) Male Princ. 2) Female Princ.	47 57	4.77 4.63	0.47 0.61	n.s.
13.	1) Male Princ. 2) Female Princ.	47 57	4.64 4.68	0.56 0.57	n.s.
14.	1) Male Princ. 2) Female Princ.	47 57	4.57 4.65	0.74 0.69	n.s.
15.	1) Male Princ. 2) Female Princ.	47 57	4.72 4.70	0.53 0.49	n.s.
16.	1) Male Princ. 2) Female Princ.	47 57	4.72 4.84	0.53 0.41	n.s.

TABLE XVIII
(Cont'd.)

Item #	Subgroup - Teachers with:	N	\bar{X}	S.D.	Sig. Difference
17.	1) Male Princ.	47	4.66	0.66	n.s.
	2) Female Princ.	57	4.86	0.35	
18.	1) Male Princ.	47	4.06	1.00	n.s.
	2) Female Princ.	57	4.18	0.80	
19.	1) Male Princ.	47	4.64	0.52	n.s.
	2) Female Princ.	57	4.70	0.49	
21.	1) Male Princ.	47	4.34	0.75	n.s.
	2) Female Princ.	57	4.42	0.77	
23.	1) Male Princ.	47	4.49	0.54	n.s.
	2) Female Princ.	57	4.46	0.77	

TABLE XIX

Summary of Significant Differences Found on Teacher Assigned Mean Scores for the Principals' Communication Activities: Variables of School Size, Years at This School, Age and Sex of the Teachers' Principal

Item #	Sex Principal	School Size	Teachers' Years at This School	Teachers' Age Category
1.	mp > fp	X		
2.	*mp > fp			
3.	*mp > fp			
5.	mp > fp			
6.	mp < fp	X		
7.	mp < fp	X		
8.	mp < fp	X		
9.		X		
10.				
11.				
12.				
13.	mp < fp	X		
14.		X	X	
15.			X	
16.	mp < fp	X		
17.	mp < fp	X		X
18.	mp < fp	X		
19.				
21.	mp < fp			
23.				

* denotes significant differences found only for principals rated as "more effective" communicators

the significant difference found on item 21 (principal encourages differing opinions) led to the rejection of sub-hypothesis $AH_{OA}(19)$ ("As perceived and rated by teachers, there is no significant difference between male and female elementary school principals in the frequency with which they encourage teachers to express opinions which differ from their own"). Because of the relatively small number of principals in the "more effective" communicator category, generalizations made on the basis of this grouping must be made with caution. However, test results on this sample indicate that a) there is a significant difference on item 2 (written communication is clearly stated), which would point toward a rejection of sub-hypothesis $AH_{OA}(2)$ ("As perceived and rated by teachers, there is no significant difference between male and female elementary school principals in the frequency with which their written communication to teachers is clearly stated"); and b) there is a significant difference on item 3 (principal selects appropriate type of written communication), which would point toward a rejection of sub-hypothesis $AH_{OA}(3)$ ("As perceived and rated by teachers, there is no significant difference between male and female elementary school principals in the frequency with which they select appropriate types of written communication").

Statement AH_{OB} : There is no significant difference in the communication activities of male and female elementary school principals, as revealed by the self-ascribed ratings of principals.

1. Control for major, non-sex related variables. To control for each of the seven variables, principals' responses were subjected to a two-tailed t test if two subgroups were compared (as was the case for marital status), or they were subjected to an F test if more than two subgroups were compared (as for age category, academic background, years administrative experience, years at this school, and school size). There were no significant differences found among subgroups in four of the variable categories: age, academic background, marital status, and years administrative experience. These findings are listed in Tables XX, XXI, XXII, and XXIII.

(A) Years at this School. As is shown in Table XXIV, an F test of means revealed significant differences on item 6 (principal seeks individual teachers' opinions) between two sets of paired groups: a) principals who had been at their present school from 3 to 5 years compared with principals who had been at their present school from 6 to 8 years, and b) principals who had been at their school from 6 to 8 years compared with those who had been at their school 9 years or more. Principals who had been at their school from 3 to 5 years perceived themselves as seeking individual teachers' opinions significantly more often than did principals who had been in the school from 6 to 8 years; principals who had been at the school from 6 to 8 years perceived themselves as seeking individual teachers' opinions significantly less often than did principals who had been in the school 9 years or more.

(B) School size. On the basis of school size, F tests revealed significant differences between principals of small schools and

TABLE XX

Comparison of Principals' Self-Ascribed Mean Scores Regarding
Their Own Communication Activities: Age

Item #	Subgroup	N	\bar{X}	S.D.	Significant Difference
1.	1) 20-40	23	2.74	1.32	n.s.
	2) 41-50	12	3.25	1.22	
	3) above 50	9	3.33	1.32	
2.	1) 20-40	23	4.00	1.04	n.s.
	2) 41-50	12	4.33	0.49	
	3) above 50	9	4.44	0.73	
3.	1) 20-40	23	4.04	1.11	n.s.
	2) 41-50	12	4.50	0.52	
	3) above 50	9	4.11	1.62	
5.	1) 20-40	23	2.35	1.11	n.s.
	2) 41-50	12	2.50	1.31	
	3) above 50	9	1.67	0.87	
6.	1) 20-40	23	4.61	0.58	n.s.
	2) 41-50	12	4.42	1.16	
	3) above 50	9	4.89	0.33	
7.	1) 20-40	23	4.74	0.54	n.s.
	2) 41-50	12	5.00	0.00	
	3) above 50	9	4.89	0.33	
8.	1) 20-40	23	4.52	0.67	n.s.
	2) 41-50	12	4.67	0.49	
	3) above 50	9	4.78	0.44	
9.	1) 20-40	23	4.43	0.51	n.s.
	2) 41-50	12	4.33	0.78	
	3) above 50	9	4.44	0.73	
10.	1) 20-40	23	4.39	0.50	n.s.
	2) 41-50	12	4.50	0.52	
	3) above 50	9	4.44	0.53	
11.	1) 20-40	23	4.61	0.50	n.s.
	2) 41-50	12	4.83	0.39	
	3) above 50	9	4.78	0.44	
12.	1) 20-40	23	4.30	0.47	n.s.
	2) 41-50	12	4.50	0.67	
	3) above 50	9	4.56	0.53	
13.	1) 20-40	23	4.43	0.59	n.s.
	2) 41-50	12	4.41	0.51	
	3) above 50	9	4.22	0.67	

TABLE XX
(Cont'd.)

Item #	Subgroup	N	\bar{X}	S.D.	Significant Difference
14.	1) 20-40	23	4.17	0.39	n.s.
	2) 41-50	12	4.25	0.62	
	3) above 50	9	4.00	0.70	
15.	1) 20-40	23	4.30	0.56	n.s.
	2) 41-50	12	4.33	0.49	
	3) above 50	9	4.44	0.73	
16.	1) 20-40	23	4.61	0.58	n.s.
	2) 41-50	12	4.67	0.49	
	3) above 50	9	4.56	0.73	
17.	1) 20-40	23	4.52	0.59	n.s.
	2) 41-50	12	4.42	0.79	
	3) above 50	9	4.44	0.73	
18.	1) 20-40	23	4.09	0.67	n.s.
	2) 41-50	12	4.08	0.99	
	3) above 50	9	4.11	0.60	
19.	1) 20-40	23	4.35	0.57	n.s.
	2) 41-50	12	4.33	0.65	
	3) above 50	9	4.56	0.53	
21.	1) 20-40	23	4.39	0.66	n.s.
	2) 41-50	12	4.17	0.94	
	3) above 50	9	3.67	1.22	
23.	1) 20-40	23	4.00	0.60	n.s.
	2) 41-50	12	4.17	0.39	
	3) above 50	9	3.89	0.60	

TABLE XXI

Comparison of Principals' Self-ascribed Mean Scores Regarding
Their Own Communication Activities: Academic Background

Item #	Subgroup	N	\bar{X}	S.D.	Significant Difference
1.	1) 1-3 years	4	1.75	1.50	n.s.
	2) BEd	32	3.09	1.17	
	3) MEd +	8	3.25	1.48	
2.	1) 1-3 years	4	3.25	1.50	n.s.
	2) BEd	32	4.21	0.79	
	3) MEd +	8	4.50	0.53	
3.	1) 1-3 years	4	3.50	1.73	n.s.
	2) BEd	32	4.25	1.14	
	3) MEd +	8	4.25	0.46	
5.	1) 1-3 years	4	1.25	0.50	n.s.
	2) BEd	32	2.34	1.15	
	3) MEd +	8	2.38	1.19	
6.	1) 1-3 years	4	4.75	0.50	n.s.
	2) BEd	32	4.53	0.84	
	3) MEd +	8	4.88	0.35	
7.	1) 1-3 years	4	4.75	0.50	n.s.
	2) BEd	32	4.84	0.45	
	3) MEd +	8	4.88	0.35	
8.	1) 1-3 years	4	4.75	0.50	n.s.
	2) BEd	32	4.56	0.62	
	3) MEd +	8	4.75	0.46	
9.	1) 1-3 years	4	4.00	0.82	n.s.
	2) BEd	32	4.41	0.61	
	3) MEd +	8	4.63	0.52	
10.	1) 1-3 years	4	4.25	0.50	n.s.
	2) BEd	32	4.47	0.51	
	3) MEd +	8	4.38	0.52	
11.	1) 1-3 years	4	4.50	0.58	n.s.
	2) BEd	32	4.72	0.46	
	3) MEd +	8	4.75	0.46	
12.	1) 1-3 years	4	4.25	0.50	n.s.
	2) BEd	32	4.41	0.56	
	3) MEd +	8	4.50	0.53	
13.	1) 1-3 years	4	4.00	0.82	n.s.
	2) BEd	32	4.41	0.50	
	3) MEd +	8	4.50	0.76	

TABLE XXI
(Cont'd.)

Item #	Subgroup	N	\bar{X}	S.D.	Significant Difference
14.	1) 1-3 years	4	4.25	0.50	n.s.
	2) BEd	32	4.12	0.55	
	3) MEd +	8	4.25	0.46	
15.	1) 1-3 years	4	4.00	0.82	n.s.
	2) BEd	32	4.38	0.55	
	3) MEd +	8	4.38	0.52	
16.	1) 1-3 years	4	4.00	0.82	n.s.
	2) BEd	32	4.69	0.54	
	3) MEd +	8	4.63	0.52	
17.	1) 1-3 years	4	4.25	0.50	n.s.
	2) BEd	32	4.50	0.72	
	3) MEd +	8	4.50	0.53	
18.	1) 1-3 years	4	4.25	0.50	n.s.
	2) BEd	32	4.13	0.79	
	3) MEd +	8	3.88	0.64	
19.	1) 1-3 years	4	4.25	0.50	n.s.
	2) BEd	32	4.41	0.61	
	3) MEd +	8	4.38	0.52	
21.	1) 1-3 years	4	4.25	0.50	n.s.
	2) BEd	32	4.09	0.99	
	3) MEd +	8	4.50	0.53	
23.	1) 1-3 years	4	4.00	0.82	n.s.
	2) BEd	32	4.06	0.50	
	3) MEd +	8	3.88	0.64	

TABLE XXII

Comparison of Principals' Self-ascribed Mean Scores Regarding
Their Own Communication Activities: Marital Status

Item #	Single (N=5)		Married (N=39)		Significant Difference
	\bar{X}	S.D.	\bar{X}	S.D.	
1.	2.80	1.30	3.03	1.31	n.s.
2.	3.40	1.34	4.28	0.76	n.s.
3.	3.40	1.34	4.28	1.05	n.s.
5.	2.60	1.52	2.21	1.10	n.s.
6.	4.80	0.45	4.59	0.79	n.s.
7.	4.60	0.89	4.87	0.34	n.s.
8.	4.20	0.84	4.67	0.53	n.s.
9.	4.20	0.45	4.44	0.64	n.s.
10.	4.40	0.55	4.44	0.50	n.s.
11.	4.60	0.55	4.72	0.46	n.s.
12.	4.40	0.55	4.41	0.55	n.s.
13.	4.60	0.55	4.36	0.58	n.s.
14.	4.20	0.45	4.15	0.54	n.s.
15.	4.20	0.45	4.36	0.58	n.s.
16.	4.20	0.84	4.67	0.53	n.s.
17.	4.20	0.84	4.51	0.64	n.s.
18.	4.00	0.71	4.10	0.75	n.s.
19.	4.40	0.55	4.38	0.59	n.s.
21.	4.40	0.55	4.18	0.93	n.s.
23.	4.20	0.45	4.00	0.56	n.s.

TABLE XXIII

Comparison of Principals' Self-ascribed Mean Scores Regarding Their Own Communication Activities: Years Administrative Experience

Item #	Subgroup	N	\bar{X}	S.D.	Significant Difference
1.	a) 1-4 yrs.	13	2.69	1.32	n.s.
	b) 5-10 yrs.	15	3.07	1.28	
	c) 11 + yrs.	16	3.19	1.33	
2.	a) 1-4 yrs.	13	4.00	1.00	n.s.
	b) 5-10 yrs.	15	4.13	0.99	
	c) 11 + yrs.	16	4.38	0.62	
3.	a) 1-4 yrs.	13	3.92	0.95	n.s.
	b) 5-10 yrs.	15	4.27	1.10	
	c) 11 + yrs.	16	4.31	1.25	
5.	a) 1-4 yrs.	13	2.30	1.03	n.s.
	b) 5-10 yrs.	15	2.20	1.26	
	c) 11 + yrs.	16	2.25	1.18	
6.	a) 1-4 yrs.	13	4.69	0.48	n.s.
	b) 5-10 yrs.	15	4.53	0.64	
	c) 11 + yrs.	16	4.63	1.02	
7.	a) 1-4 yrs.	13	4.85	0.38	n.s.
	b) 5-10 yrs.	15	4.67	0.62	
	c) 11 + yrs.	16	5.00	0.00	
8.	a) 1-4 yrs.	13	4.69	0.48	n.s.
	b) 5-10 yrs.	15	4.40	0.74	
	c) 11 + yrs.	16	4.75	0.45	
9.	a) 1-4 yrs.	13	4.38	0.51	n.s.
	b) 5-10 yrs.	15	4.47	0.52	
	c) 11 + yrs.	16	4.38	0.81	
10.	a) 1-4 yrs.	13	4.31	0.48	n.s.
	b) 5-10 yrs.	15	4.53	0.52	
	c) 11 + yrs.	16	4.44	0.51	
11.	a) 1-4 yrs.	13	4.62	0.51	n.s.
	b) 5-10 yrs.	15	4.60	0.51	
	c) 11 + yrs.	16	4.88	0.34	
12.	a) 1-4 yrs.	13	4.46	0.52	n.s.
	b) 5-10 yrs.	15	4.20	0.41	
	c) 11 + yrs.	16	4.56	0.63	
13.	a) 1-4 yrs.	13	4.31	0.63	n.s.
	b) 5-10 yrs.	15	4.47	0.52	
	c) 11 + yrs.	16	4.38	0.62	
14.	a) 1-4 yrs.	13	4.15	0.38	n.s.
	b) 5-10 yrs.	15	4.20	0.41	
	c) 11 + yrs.	16	4.13	0.72	

TABLE XXIII
(Cont'd.)

Item #	Subgroup	N	\bar{X}	S.D.	Significant Difference
15.	a) 1-4 yrs.	13	4.08	0.49	n.s.
	b) 5-10 yrs.	15	4.33	0.49	
	c) 11 + yrs.	16	4.56	0.63	
16.	a) 1-4 yrs.	13	4.54	0.52	n.s.
	b) 5-10 yrs.	15	4.53	0.64	
	c) 11 + yrs.	16	4.75	0.58	
17.	a) 1-4 yrs.	13	4.62	0.51	n.s.
	b) 5-10 yrs.	15	4.40	0.63	
	c) 11 + yrs.	16	4.44	0.81	
18.	a) 1-4 yrs.	13	4.23	0.60	n.s.
	b) 5-10 yrs.	15	3.93	0.70	
	c) 11 + yrs.	16	4.13	0.89	
19.	a) 1-4 yrs.	13	4.23	0.60	n.s.
	b) 5-10 yrs.	15	4.33	0.49	
	c) 11 + yrs.	16	4.56	0.63	
21.	a) 1-4 yrs.	13	4.23	0.60	n.s.
	b) 5-10 yrs.	15	4.13	1.06	
	c) 11 + yrs.	16	4.19	0.98	
23.	a) 1-4 yrs.	13	3.85	0.55	n.s.
	b) 5-10 yrs.	15	4.13	0.35	
	c) 11 + yrs.	16	4.06	0.68	

TABLE XXIV

Comparison of Principals' Self-ascribed Mean Scores Regarding Their Own Communication Activities: Years at Present School

Item #	Subgroup	N	\bar{X}	S.D.	Significant Difference
1.	a) 1-2 yrs.	17	2.88	1.22	n.s.
	b) 3-5 yrs.	16	2.81	1.28	
	c) 6-8 yrs.	6	3.50	1.52	
	d) 9 + yrs.	5	3.40	1.52	
2.	a) 1-2 yrs.	17	4.18	0.39	n.s.
	b) 3-5 yrs.	16	3.94	1.24	
	c) 6-8 yrs.	6	4.83	0.41	
	d) 9 + yrs.	5	4.20	0.84	
3.	a) 1-2 yrs.	17	4.12	0.49	n.s.
	b) 3-5 yrs.	16	4.19	1.33	
	c) 6-8 yrs.	6	4.83	0.41	
	d) 9 + yrs.	5	3.60	2.07	
5.	a) 1-2 yrs.	17	2.53	1.07	n.s.
	b) 3-5 yrs.	16	1.94	0.93	
	c) 6-8 yrs.	6	2.17	1.60	
	d) 9 + yrs.	5	2.40	1.52	
6.	a) 1-2 yrs.	17	4.59	0.51	b-c, $p < .05$ c-d, $p < .01$
	b) 3-5 yrs.	16	4.81	0.40	
	c) 6-8 yrs.	6	3.83	1.60	
	d) 9 + yrs.	5	5.00	0.00	
7.	a) 1-2 yrs.	17	4.82	0.53	n.s.
	b) 3-5 yrs.	16	4.81	0.40	
	c) 6-8 yrs.	6	4.83	0.41	
	d) 9 + yrs.	5	5.00	0.00	
8.	a) 1-2 yrs.	17	4.65	0.61	n.s.
	b) 3-5 yrs.	16	4.63	0.50	
	c) 6-8 yrs.	6	4.50	0.84	
	d) 9 + yrs.	5	4.60	0.55	
9.	a) 1-2 yrs.	17	4.29	0.59	n.s.
	b) 3-5 yrs.	16	4.44	0.73	
	c) 6-8 yrs.	6	4.67	0.52	
	d) 9 + yrs.	5	4.40	0.55	
10.	a) 1-2 yrs.	17	4.41	0.51	n.s.
	b) 3-5 yrs.	16	4.44	0.51	
	c) 6-8 yrs.	6	4.50	0.55	
	d) 9 + yrs.	5	4.40	0.55	
11.	a) 1-2 yrs.	17	4.59	0.51	n.s.
	b) 3-5 yrs.	16	4.88	0.34	
	c) 6-8 yrs.	6	4.67	0.52	
	d) 9 + yrs.	5	4.60	0.55	

TABLE XXIV
(Cont'd.)

Item #	Subgroup	N	\bar{X}	S.D.	Significant Difference
12.	a) 1-2 yrs.	17	4.24	0.56	n.s.
	b) 3-5 yrs.	16	4.56	0.51	
	c) 6-8 yrs.	6	4.33	0.52	
	d) 9 + yrs.	5	4.60	0.55	
13.	a) 1-2 yrs.	17	4.29	0.59	n.s.
	b) 3-5 yrs.	16	4.38	0.62	
	c) 6-8 yrs.	6	4.67	0.52	
	d) 9 + yrs.	5	4.40	0.55	
14.	a) 1-2 yrs.	17	4.06	0.24	n.s.
	b) 3-5 yrs.	16	4.25	0.58	
	c) 6-8 yrs.	6	4.50	0.55	
	d) 9 + yrs.	5	3.80	0.84	
15.	a) 1-2 yrs.	17	4.18	0.53	n.s.
	b) 3-5 yrs.	16	4.38	0.62	
	c) 6-8 yrs.	6	4.50	0.55	
	d) 9 + yrs.	5	4.60	0.55	
16.	a) 1-2 yrs.	17	4.53	0.62	n.s.
	b) 3-5 yrs.	16	4.69	0.60	
	c) 6-8 yrs.	6	4.67	0.52	
	d) 9 + yrs.	5	4.60	0.55	
17.	a) 1-2 yrs.	17	4.53	0.72	n.s.
	b) 3-5 yrs.	16	5.63	0.50	
	c) 6-8 yrs.	6	4.33	0.52	
	d) 9 + yrs.	5	4.00	1.00	
18.	a) 1-2 yrs.	17	4.12	0.60	n.s.
	b) 3-5 yrs.	16	4.13	0.72	
	c) 6-8 yrs.	6	4.00	0.89	
	d) 9 + yrs.	5	4.00	1.22	
19.	a) 1-2 yrs.	17	4.18	0.64	n.s.
	b) 3-5 yrs.	16	4.50	0.52	
	c) 6-8 yrs.	6	4.50	0.55	
	d) 9 + yrs.	5	4.60	0.55	
21.	a) 1-2 yrs.	17	4.35	0.61	n.s.
	b) 3-5 yrs.	16	4.19	1.11	
	c) 6-8 yrs.	6	4.17	0.75	
	d) 9 + yrs.	5	3.60	1.14	
23.	a) 1-2 yrs.	17	3.82	0.53	n.s.
	b) 3-5 yrs.	16	4.06	0.44	
	c) 6-8 yrs.	6	4.50	0.55	
	d) 9 + yrs.	5	4.00	0.71	

principals of large schools on item 1 (frequency of written communication), with the former group rating themselves significantly lower than the latter group. Also, there was a significant difference between principals of medium-sized schools and principals of large schools on item 18 (principal encourages less aggressive teachers), with the former group rating themselves significantly higher than the latter group. Table XXV summarizes findings in this category.

2. Comparison of communication activities on the basis of the principals' sex. As is shown in Table XXVI, a two-tailed t test, modified by the Welch T' adjustment, revealed a significant difference between the self-ratings of female principals and the self-ratings of male principals on item 6 (principal seeks individual teachers' opinions) and on item 18 (principal encourages less aggressive teachers), with female principals rating themselves higher than male principals rated themselves. On the other hand, male principals rated themselves significantly higher than female principals rated themselves on item 15 (means what he/she says).

(A) "More effective" communicators. Male principals in the "more effective" communicator category rated themselves significantly higher than female principals in that category rated themselves on item 19 (appropriateness of verbal communication style). The mean scores on items in this category are found in Table XXVII.

(B) "Moderately effective" communicators. On item 13 (effective exchange of information at staff meetings), male principals in the "moderately effective" communicator category rated themselves

TABLE XXV

Comparison of Principals' Self-ascribed Mean Scores Regarding Their Own Communication Activities: School Size

Item #	Subgroup	N	\bar{X}	S.D.	Significant Difference
1.	a) small	13	2.15	0.98	a-c, $p < .05$
	b) medium	15	3.27	1.33	
	c) large	16	3.44	1.21	
2.	a) small	13	4.00	1.00	n.s.
	b) medium	15	4.27	1.10	
	c) large	16	4.25	0.45	
3.	a) small	13	4.15	1.07	n.s.
	b) medium	15	4.13	1.55	
	c) large	16	4.25	0.58	
5.	a) small	13	1.85	0.80	n.s.
	b) medium	15	2.27	1.22	
	c) large	16	2.56	1.26	
6.	a) small	13	4.69	0.48	n.s.
	b) medium	15	4.53	1.13	
	c) large	16	4.63	0.50	
7.	a) small	13	4.85	0.38	n.s.
	b) medium	15	4.93	0.26	
	c) large	16	4.75	0.58	
8.	a) small	13	4.69	0.48	n.s.
	b) medium	15	4.73	0.59	
	c) large	16	4.44	0.63	
9.	a) small	13	4.23	0.44	n.s.
	b) medium	15	4.73	0.59	
	c) large	16	4.25	0.68	
10.	a) small	13	4.31	0.48	n.s.
	b) medium	15	4.53	0.52	
	c) large	16	4.44	0.51	
11.	a) small	13	4.54	0.52	n.s.
	b) medium	15	4.80	0.41	
	c) large	16	4.75	0.45	
12.	a) small	13	4.31	0.48	n.s.
	b) medium	15	4.67	0.49	
	c) large	16	4.25	0.58	
13.	a) small	13	4.54	0.52	n.s.
	b) medium	15	4.47	0.64	
	c) large	16	4.19	0.54	

TABLE XXV
(Cont'd.)

Item #	Subgroup	N	\bar{X}	S.D.	Significant Difference
14.	a) small	13	4.08	0.49	n.s.
	b) medium	15	4.27	0.70	
	c) large	16	4.13	0.34	
15.	a) small	13	4.15	0.55	n.s.
	b) medium	15	4.40	0.63	
	c) large	16	4.44	0.51	
16.	a) small	13	4.62	0.51	n.s.
	b) medium	15	4.60	0.63	
	c) large	16	4.63	0.62	
17.	a) small	13	4.62	0.51	n.s.
	b) medium	15	4.47	0.74	
	c) large	16	4.38	0.72	
18.	a) small	13	4.15	0.55	b-c, $p < .05$
	b) medium	15	4.40	0.83	
	c) large	16	3.75	0.68	
19.	a) small	13	4.38	0.65	n.s.
	b) medium	15	4.47	0.52	
	c) large	16	4.31	0.60	
21.	a) small	13	4.23	0.73	n.s.
	b) medium	15	3.93	1.22	
	c) large	16	4.38	0.62	
23.	a) small	13	3.77	0.60	n.s.
	b) medium	15	4.27	0.59	
	c) large	16	4.00	0.37	

TABLE XXVI

Comparison of Principals' Self-ascribed Mean Scores Regarding
Their Own Communication Activities: Sex

Item #	Male Princ. (N=29)		Female Princ. (N=15)		Significant Difference
	\bar{X}	S.D.	\bar{X}	S.D.	
1.	3.07	1.25	2.87	1.41	n.s.
2.	4.24	0.83	4.07	0.96	n.s.
3.	4.14	1.16	4.27	1.03	n.s.
5.	2.34	1.14	2.07	1.16	n.s.
6.	4.48	0.87	4.87	0.35	$p < .05$
7.	4.76	0.50	5.00	0.00	n.s.
8.	4.52	0.63	4.80	0.41	n.s.
9.	4.38	0.62	4.47	0.64	n.s.
10.	4.41	0.50	4.47	0.52	n.s.
11.	4.72	0.45	4.67	0.49	n.s.
12.	4.34	0.55	4.53	0.52	n.s.
13.	4.28	0.53	4.60	0.63	n.s.
14.	4.10	0.56	4.27	0.46	n.s.
15.	4.48	0.51	4.07	0.59	$p < .05$
16.	4.62	0.56	4.60	0.63	n.s.
17.	4.38	0.73	4.67	0.49	n.s.
18.	3.90	0.77	4.47	0.52	$p < .01$
19.	4.38	0.56	4.40	0.63	n.s.
21.	4.07	1.00	4.40	0.63	n.s.
23.	4.03	0.50	4.00	0.65	n.s.

TABLE XXVII

Comparison of Principals' Self-ascribed Mean Scores Regarding Their Own Communication Activities: "More Effective" Communicators

Item #	Male Princ. (N=7)		Female Princ. (N=8)		Significant Difference
	\bar{X}	S.D.	\bar{X}	S.D.	
1.	2.43	1.29	2.13	1.17	n.s.
2.	3.71	1.16	3.63	0.99	n.s.
3.	4.00	1.31	3.75	1.09	n.s.
5.	2.14	1.25	2.50	1.00	n.s.
6.	4.14	1.36	4.75	0.43	n.s.
7.	4.86	0.35	5.00	0.00	n.s.
8.	4.71	0.45	4.75	0.43	n.s.
9.	4.29	0.45	4.50	0.50	n.s.
10.	4.14	0.35	4.38	0.48	n.s.
11.	4.86	0.35	4.63	0.48	n.s.
12.	4.43	0.49	4.50	0.50	n.s.
13.	4.57	0.49	4.63	0.48	n.s.
14.	4.14	0.64	4.25	0.43	n.s.
15.	4.43	0.49	4.00	0.50	n.s.
16.	4.71	0.45	4.63	0.48	n.s.
17.	4.71	0.45	4.63	0.48	n.s.
18.	4.29	0.70	4.38	0.48	n.s.
19.	4.71	0.45	4.13	0.60	$p < .05$
21.	4.43	0.73	4.13	0.60	n.s.
23.	4.29	0.70	3.75	0.66	n.s.

significantly lower than female principals in that category rated themselves. A summary of findings is found in Table XXVIII; however, it must be remembered that the number of female principals in that category is too low for their responses to be considered as being positively indicative of general trends.

(C) "Less effective" communicators. As is shown in Table XXIX, male principals in the "less effective" communicator category rated themselves significantly lower on items 6 (principal seeks individual teachers' opinions) and 18 (principal encourages less aggressive teachers) than female principals in that category rated themselves on the same two items.

3. Conclusions. The variable of school size was associated with significant differences found between the mean self-ascribed ratings of male and female principals on item 1 (frequency of written communication) and on item 18 (principal encourages less aggressive teachers); the variable of years at present school was associated with significant differences found on item 6 (principal seeks individual teachers' opinions). Sex alone seemed to account for the significant difference found for all principals on item 15 (means what he/she says); it seemed to account for the significant difference found for "more effective" principals on item 19 (appropriateness of verbal communication style); it seemed to account for the significant difference found for "moderately effective" principals on item 13 (effective exchange of information at staff meetings). These findings are summarized in Table XXX. The significant difference found for all principals on item 15 (means what he/she says)

TABLE XXVIII

Comparison of Principals' Self-ascribed Mean Scores Regarding Their Own Communication Activities: "Moderately Effective" Communicators

Item #	Male Princ. (N=12)		Female Princ. (N=2)		Significant Difference
	\bar{X}	S.D.	\bar{X}	S.D.	
1.	3.25	1.09	4.00	1.00	n.s.
2.	4.25	0.60	4.50	0.50	n.s.
3.	4.08	1.32	5.00	0.00	n.s.
5.	2.42	0.95	1.00	0.00	n.s.
6.	4.75	0.43	5.00	0.00	n.s.
7.	4.67	0.62	5.00	0.00	n.s.
8.	4.42	0.64	5.00	0.00	n.s.
9.	4.50	0.50	5.00	0.00	n.s.
10.	4.50	0.50	5.00	0.00	n.s.
11.	4.67	0.47	5.00	0.00	n.s.
12.	4.42	0.49	5.00	0.00	n.s.
13.	4.08	0.49	5.00	0.00	p < .05
14.	3.92	0.49	4.50	0.50	n.s.
15.	4.67	0.47	4.50	0.50	n.s.
16.	4.42	0.64	5.00	0.00	n.s.
17.	4.25	0.83	5.00	0.00	n.s.
18.	3.75	0.92	5.00	0.00	n.s.
19.	4.33	0.47	5.00	0.00	n.s.
21.	3.92	1.26	5.00	0.00	n.s.
23.	3.83	0.37	4.50	0.50	n.s.

TABLE XXIX

Comparison of Principals' Self-ascribed Mean Scores Regarding Their Own Communication Activities: "Less Effective" Communicators

Item #	Male Princ. (N=10)		Female Princ. (N=5)		Significant Difference
	\bar{X}	S.D.	\bar{X}	S.D.	
1.	3.30	1.19	3.60	1.02	n.s.
2.	4.60	0.49	4.60	0.49	n.s.
3.	4.30	0.64	4.80	0.40	n.s.
5.	2.40	1.20	1.80	1.17	n.s.
6.	4.40	0.66	5.00	0.00	$p < .05$
7.	4.80	0.40	5.00	0.00	n.s.
8.	4.50	0.67	4.80	0.40	n.s.
9.	4.30	0.78	4.20	0.75	n.s.
10.	4.50	0.50	4.40	0.49	n.s.
11.	4.70	0.46	4.60	0.49	n.s.
12.	4.20	0.60	4.40	0.49	n.s.
13.	4.30	0.46	4.40	0.80	n.s.
14.	4.30	0.46	4.20	0.40	n.s.
15.	4.30	0.46	4.00	0.63	n.s.
16.	4.80	0.40	4.40	0.80	n.s.
17.	4.30	0.64	4.60	0.49	n.s.
18.	3.80	0.40	4.40	0.49	$p < .05$
19.	4.20	0.60	4.60	0.49	n.s.
21.	4.00	0.63	4.60	0.49	n.s.
23.	4.10	0.30	4.20	0.40	n.s.

TABLE XXX

Summary of Significant Differences Found on Principals' Self-Ascribed Scores Regarding Their Own Communication Activities: Variables of School Size, Years at Present School, and Sex

Item #	Sex	School Size	Years at Present School
1.		X	
2.			
3.			
5.			
6.	mp < fp		X
7.			
8.			
9.			
10.			
11.			
12.			
13.	+mp < fp		
14.			
15.	mp > fp		
16.			
17.			
18.	mp < fp	X	
19.	*mp > fp		
21.			
23.			

+ denotes significant differences found only for principals rated as "moderately effective" communicators

* denotes significant differences found only for principals rated as "more effective" communicators.

led to the rejection of sub-hypothesis $AH_{OB}(14)$ ("As revealed by the self-ascribed ratings of principals, there is no significant difference between male and female elementary school principals in the frequency with which they mean exactly what they say"). Because there was a relatively small number of principals in the "more effective" and "moderately effective" communicator categories, conclusions and generalizations made on the basis of these results must be made with caution. However, test results on this sample indicated: a) in the "more effective" category, there was a significant difference on item 19 (appropriateness of verbal communication style), which would point toward a rejection of sub-hypothesis $AH_{OB}(18)$ ("As revealed by the self-ascribed ratings of principals, there is no significant difference between male and female elementary school principals in the frequency with which they use appropriately formal or informal verbal communication"); and b) in the "moderately effective" category, there was a significant difference on item 13 (effective exchange of information at staff meetings), which would point toward a rejection of sub-hypothesis $AH_{OB}(12)$ ("As revealed by the self-ascribed ratings of principals, there is no significant difference between male and female elementary school principals in the frequency with which they effectively exchange information with their teachers at staff meetings").

Statement AH_{OC} : There is no significant difference between the teacher-assigned ratings and the principals' self-ascribed ratings regarding principal communication activities.

1. Totals. As is shown in Table XXXI, a t test of means, modified by the Welch T' adjustment, revealed significant differences between the mean scores of teachers and those of principals on item 6 (principal seeks individual teachers' opinions), item 7 (principal seems interested in teachers' views), item 8 (principal attempts to understand rationale behind teachers' opinions), item 9 (principal sought out by teachers), item 11 (principal seems relaxed when talking with teachers), item 13 (effective exchange of information at staff meetings), item 16 (principal encourages teacher contribution to discussions), item 17 (principal explains reasons for decisions), item 18 (principal encourages less aggressive teachers), item 19 (appropriateness of verbal communication style), and item 21 (principal encourages differing opinions). In all instances, the teachers rated the principals significantly lower than the principals rated themselves.

2. Groupings.

(A) All teachers with male principals versus all male principals. The Welch T' adjustment on a two-tailed t test revealed significant differences between the mean scores of teachers with male principals and the mean self-ascribed scores of all male principals on item 6 (principal seeks individual teachers' opinions), item 7 (principal seems interested in teachers' views), item 8 (principal attempts to understand rationale behind teachers' opinions), item 9 (principal sought out by teachers), item 11 (principal seems relaxed when talking with teachers), item 15 (means what he/she says), item 16 (principal encourages teacher contribution to discussions), item

TABLE XXXI

Comparison of Teacher-assigned Ratings and Principals' Self-ascribed Ratings Regarding Principal Communication Activities: Totals

Item #	Teachers (N=362)		Principals (N=44)		Significant Difference
	\bar{X}	S.D.	\bar{X}	S.D.	
1.	3.09	1.23	3.00	1.28	n.s.
2.	4.28	1.02	4.18	0.86	n.s.
3.	4.13	1.12	4.18	1.09	n.s.
5.	2.14	1.09	2.25	1.13	n.s.
6.	3.50	1.18	4.61	0.75	$p < .001$
7.	3.79	1.24	4.84	0.42	$p < .001$
8.	3.80	1.19	4.61	0.57	$p < .001$
9.	3.80	1.03	4.41	0.61	$p < .001$
10.	4.36	0.88	4.43	0.50	n.s.
11.	4.41	0.83	4.70	0.46	$p < .001$
12.	4.29	0.88	4.41	0.54	n.s.
13.	4.15	0.93	4.39	0.57	$p < .05$
14.	4.18	0.99	4.16	0.52	n.s.
15.	4.14	1.01	4.34	0.56	n.s.
16.	4.27	0.96	4.61	0.57	$p < .001$
17.	4.19	0.98	4.48	0.66	$p < .05$
18.	3.30	1.20	4.09	0.73	$p < .001$
19.	4.16	0.88	4.39	0.57	$p < .05$
21.	3.71	1.09	4.18	0.89	$p < .01$
23.	3.94	0.94	4.02	0.54	n.s.

17 (principal explains reasons for decisions), item 18 (principal encourages less aggressive teachers), item 19 (appropriateness of verbal communication style), and item 21 (principal encourages differing opinions). In all cases, the teachers rated the male principals significantly lower than the male principals rated themselves. A summary of significant differences found in this category is given in Table XXXII.

(B) All teachers with female principals versus all female principals. Significant differences were found between the mean scores of teachers with female principals and the mean self-ascribed scores of female principals on item 6 (principal seeks individual teachers' opinions), item 7 (principal seems interested in teachers' views), item 8 (principal attempts to understand rationale behind teachers' views), item 9 (principal sought out by teachers), item 18 (principal encourages less aggressive teachers), and item 21 (principal encourages differing opinions). In each of these instances, as is shown in Table XXXIII, the teachers rated the female principals significantly lower than the female principals rated themselves.

(C) Teachers with male principals rated as "more effective" communicators versus male principals rated as "more effective" communicators. As is found in Table XXXIV, a significant difference was found between teachers and male principals in this category on item 10 (principal gives complete attention to teachers). The mean rating of teachers was significantly higher than the mean self-ascribed rating of the male principals.

(D) Teachers with female principals rated as "more effective" communicators versus female principals rated as "more effective"

TABLE XXXII

Comparison of Teacher-assigned Ratings and Principals' Self-ascribed Ratings Regarding Principal Communication Activities: Teachers with Male Principals vs. Male Principals

Item #	Teachers (N=247)		Male Princ. (N=29)		Significant Difference
	\bar{X}	S.D.	\bar{X}	S.D.	
1.	3.21	1.23	3.07	1.23	n.s.
2.	4.29	0.98	4.24	0.82	n.s.
3.	4.15	1.05	4.14	1.14	n.s.
5.	2.23	1.11	2.34	1.12	n.s.
6.	3.38	1.18	4.48	0.86	$p < .001$
7.	3.68	1.26	4.76	0.50	$p < .001$
8.	3.71	1.22	4.52	0.62	$p < .001$
9.	3.74	1.03	4.38	0.61	$p < .001$
10.	4.35	0.86	4.41	0.49	n.s.
11.	4.42	0.79	4.72	0.45	$p < .01$
12.	4.29	0.86	4.34	0.54	n.s.
13.	4.08	0.91	4.28	0.52	n.s.
14.	4.14	0.99	4.10	0.55	n.s.
15.	4.07	1.01	4.48	0.50	$p < .001$
16.	4.19	0.94	4.62	0.55	$p < .001$
17.	4.08	1.01	4.38	0.72	$p < .05$
18.	3.18	1.20	3.90	0.76	$p < .001$
19.	4.12	0.84	4.38	0.55	$p < .05$
21.	3.57	1.08	4.07	0.98	$p < .05$
23.	3.91	0.87	4.03	0.49	n.s.

TABLE XXXIII

Comparison of Teacher-assigned Ratings and Principals' Self-ascribed Ratings Regarding Principal Communication Activities: Teachers with Female Principals vs. Female Principals

Item #	Teachers (N=115)		Female Principals (N=15)		Significant Difference
	\bar{X}	S.D.	\bar{X}	S.D.	
1.	2.81	1.18	2.87	1.36	n.s.
2.	4.24	1.09	4.07	0.93	n.s.
3.	4.09	1.24	4.27	1.00	n.s.
5.	1.96	1.02	2.07	1.12	n.s.
6.	3.74	1.15	4.87	0.34	$p < .001$
7.	4.03	1.16	5.00	0.00	$p < .001$
8.	3.99	1.11	4.80	0.40	$p < .001$
9.	3.93	1.03	4.47	0.62	$p < .01$
10.	4.37	0.93	4.47	0.50	n.s.
11.	4.39	0.91	4.67	0.47	n.s.
12.	4.30	0.92	4.53	0.50	n.s.
13.	4.31	0.95	4.60	0.61	n.s.
14.	4.27	0.98	4.27	0.44	n.s.
15.	4.30	1.00	4.07	0.57	n.s.
16.	4.44	0.99	4.60	0.61	n.s.
17.	4.44	0.86	4.67	0.47	n.s.
18.	3.57	1.17	4.47	0.50	$p < .001$
19.	4.24	0.97	4.40	0.61	n.s.
21.	4.01	1.03	4.40	0.61	$p < .05$
23.	4.01	1.06	4.00	0.63	n.s.

TABLE XXXIV

Comparison of Teacher-assigned Ratings and Principals' Self-ascribed Ratings Regarding Principal Communication Activities: Teachers with Male Principals vs. Male Principals - "More Effective" Communicators

Item #	Teachers (N=47)		Principals (N=7)		Significant Difference
	\bar{X}	S.D.	\bar{X}	S.D.	
1.	3.49	1.07	2.43	1.29	n.s.
2.	4.74	0.70	3.71	1.16	n.s.
3.	4.64	0.81	4.00	1.31	n.s.
5.	2.57	1.14	2.14	1.25	n.s.
6.	3.87	1.00	4.14	1.36	n.s.
7.	4.51	0.87	4.86	0.35	n.s.
8.	4.51	0.87	4.71	0.45	n.s.
9.	4.30	0.85	4.29	0.45	n.s.
10.	4.79	0.41	4.14	0.35	p<.01
11.	4.77	0.47	4.86	0.35	n.s.
12.	4.77	0.47	4.43	0.49	n.s.
13.	4.64	0.56	4.57	0.49	n.s.
14.	4.57	0.74	4.14	0.64	n.s.
15.	4.72	0.53	4.43	0.49	n.s.
16.	4.72	0.53	4.71	0.45	n.s.
17.	4.66	0.66	4.71	0.45	n.s.
18.	4.06	1.00	4.29	0.70	n.s.
19.	4.64	0.52	4.71	0.45	n.s.
21.	4.34	0.75	4.43	0.73	n.s.
23.	4.49	0.54	4.29	0.70	n.s.

communicators. Mean teacher ratings of female principals in this category were significantly higher than the mean self-ascribed ratings of female principals on item 14 (concise expression of ideas), item 15 (means what he/she says), and item 23 (principal makes announcements at appropriate times). However, mean teacher ratings were significantly lower than the mean self-ascribed ratings of female principals on item 6 (principal seeks individual teachers' opinions) and on item 7 (principal seems interested in teachers' views). Table XXXV provides a summary of results in this category.

(E) Teachers with male principals rated as "moderately effective" communicators versus male principals rated as "moderately effective" communicators. Mean teacher ratings of male principals in this category were significantly higher than the mean self-ascribed ratings of those male principals on item 14 (concise expression of ideas). However, mean teacher ratings were significantly lower than the mean self-ascribed ratings of male principals on item 6 (principal seeks individual teachers' opinions), item 7 (principal seems interested in teachers' views), item 8 (principal attempts to understand rationale behind teachers' opinions), item 9 (principal sought out by teachers), and item 15 (means what he/she says). Table XXXVI provides a summary of results in this category.

(F) Teachers with female principals rated as "moderately effective" communicators versus female principals rated as "moderately effective" communicators. Because there were only two female principals in this category, there were not enough data to make generalizable comparisons. However, as is shown in Table XXXVII, results from the data available were as follows: there were significant

TABLE XXXV

Comparison of Teacher-assigned Ratings and Principals' Self-ascribed Ratings Regarding Principal Communication Activities: Teachers with Female Principals vs. Female Principals - "More Effective" Communicator Category

Item #	Teachers (N=57) \bar{X}	S.D.	Principals (N=8) \bar{X}	S.D.	Significant Difference
1.	2.47	1.19	2.13	1.17	n.s.
2.	4.25	1.20	3.63	0.99	n.s.
3.	4.21	1.27	3.75	1.09	n.s.
5.	1.88	0.96	2.50	1.00	n.s.
6.	4.11	1.09	4.75	0.43	$p < .01$
7.	4.51	0.86	5.00	0.00	$p < .01$
8.	4.49	0.80	4.75	0.43	n.s.
9.	4.23	0.90	4.50	0.50	n.s.
10.	4.74	0.51	4.38	0.48	n.s.
11.	4.74	0.44	4.63	0.48	n.s.
12.	4.63	0.61	4.50	0.50	n.s.
13.	4.68	0.57	4.63	0.48	n.s.
14.	4.65	0.69	4.25	0.43	$p < .05$
15.	4.70	0.49	4.00	0.50	$p < .01$
16.	4.84	0.41	4.63	0.48	n.s.
17.	4.86	0.35	4.63	0.48	n.s.
18.	4.18	0.80	4.38	0.48	n.s.
19.	4.70	0.49	4.13	0.60	n.s.
21.	4.42	0.77	4.13	0.60	n.s.
23.	4.46	0.77	3.75	0.66	$p < .05$

TABLE XXXVI

Comparison of Teacher-assigned Ratings and Principals' Self-ascribed Ratings Regarding Principal Communication Activities: Teachers with Male Principals vs. Male Principals - "Moderately Effective" Communicators

Item #	Teachers (N=110)		Principals (N=12)		Significant Difference
	\bar{X}	S.D.	\bar{X}	S.D.	
1.	3.39	1.12	3.25	1.09	n.s.
2.	4.38	0.84	4.25	0.60	n.s.
3.	4.25	0.88	4.08	1.32	n.s.
5.	2.17	1.05	2.42	0.95	n.s.
6.	3.50	1.12	4.75	0.43	$p < .001$
7.	3.76	1.10	4.67	0.62	$p < .001$
8.	3.82	1.07	4.42	0.64	$p < .05$
9.	3.71	0.92	4.50	0.50	$p < .001$
10.	4.43	0.77	4.50	0.50	n.s.
11.	4.45	0.71	4.67	0.47	n.s.
12.	4.32	0.80	4.42	0.49	n.s.
13.	4.28	0.69	4.08	0.49	n.s.
14.	4.38	0.71	3.92	0.49	$p < .01$
15.	4.21	0.80	4.67	0.47	$p < .001$
16.	4.31	0.82	4.42	0.64	n.s.
17.	4.29	0.77	4.25	0.83	n.s.
18.	3.15	1.05	3.75	0.92	n.s.
19.	4.21	0.69	4.33	0.47	n.s.
21.	3.72	0.88	3.92	1.26	n.s.
23.	4.04	0.73	3.83	0.37	n.s.

TABLE XXXVII

Comparison of Teacher-assigned Ratings and Principals' Self-ascribed Ratings Regarding Principal Communication Activities: Teachers with Female Principals vs. Female Principals - "Moderately Effective" Communicators

Item #	Teachers (N=21)		Principals (N=2)		Significant Difference
	\bar{X}	S.D.	\bar{X}	S.D.	
1.	3.05	0.72	4.00	1.00	n.s.
2.	4.62	0.49	4.50	0.50	n.s.
3.	3.90	1.23	5.00	0.00	n.s.
5.	2.14	1.12	1.00	0.00	n.s.
6.	3.76	0.81	5.00	0.00	n.s.
7.	4.00	0.93	5.00	0.00	n.s.
8.	3.86	0.94	5.00	0.00	n.s.
9.	3.95	0.72	5.00	0.00	n.s.
10.	4.57	0.58	5.00	0.00	n.s.
11.	4.52	0.66	5.00	0.00	n.s.
12.	4.52	0.66	5.00	0.00	n.s.
13.	4.38	0.79	5.00	0.00	n.s.
14.	4.19	0.73	4.50	0.50	n.s.
15.	4.48	0.66	4.50	0.50	n.s.
16.	4.52	0.96	5.00	0.00	n.s.
17.	4.38	0.65	5.00	0.00	n.s.
18.	2.90	1.06	5.00	0.00	$p < .05$
19.	4.19	0.66	5.00	0.00	n.s.
21.	4.00	0.53	5.00	0.00	$p < .05$
23.	4.10	0.68	4.50	0.50	n.s.

differences on items 18 (principal encourages less aggressive teachers), and 21 (principal encourages differing opinions), with the mean ratings of teachers being significantly lower than the mean self-ascribed ratings of female principals in this category.

(G) Teachers with male principals rated as "less effective" communicators versus male principals rated as "less effective" communicators. As is summarized in Table XXXVIII, significant differences were found between teachers and male principals on item 2 (written communication is clearly stated), item 3 (principal selects appropriate type of written communication), item 6 (principal seeks individual teachers' opinions), item 7 (principal seems interested in teachers' views), item 8 (principal attempts to understand rationale behind teachers' opinions), item 9 (principal sought out by teachers), item 10 (principal gives complete attention to teachers), item 11 (principal seems relaxed when talking with teachers), item 13 (effective exchange of information), item 14 (concise expression of ideas), item 15 (means what he/she says), item 16 (principal encourages teacher contribution to discussions), item 17 (principal explains reasons for decisions), item 18 (principal encourages less aggressive teachers), item 19 (appropriateness of verbal communication), item 21 (principal encourages differing opinions), and item 23 (principal makes announcements at appropriate times). Without exception, the mean self-ascribed scores of male principals were significantly higher than the mean scores of teachers.

(H) Teachers with female principals rated as "less effective" communicators versus female principals rated as "less effective" communicators. Significant differences were found between teachers

TABLE XXXVIII

Comparison of Teacher-assigned Ratings and Principals' Self-ascribed Ratings Regarding Principal Communication Activities: Teachers with Male Principals vs. Male Principals - "Less Effective" Communicators

Item #	Teachers (N=90)		Principals (N=10)		Significant Difference
	\bar{X}	S.D.	\bar{X}	S.D.	
1.	2.86	1.34	3.30	1.19	n.s.
2.	3.94	1.13	4.60	0.49	$p < .01$
3.	3.76	1.21	4.30	0.64	$p < .05$
5.	2.12	1.12	2.40	1.20	n.s.
6.	2.99	1.21	4.40	0.66	$p < .001$
7.	3.14	1.34	4.80	0.40	$p < .001$
8.	3.16	1.27	4.50	0.67	$p < .001$
9.	3.49	1.13	4.30	0.78	$p < .05$
10.	4.03	1.00	4.50	0.50	$p < .05$
11.	4.19	0.93	4.70	0.46	$p < .01$
12.	4.00	0.98	4.20	0.60	n.s.
13.	3.54	1.02	4.30	0.46	$p < .001$
14.	3.62	1.15	4.30	0.46	$p < .01$
15.	3.57	1.16	4.30	0.46	$p < .001$
16.	3.76	1.05	4.80	0.40	$p < .001$
17.	3.51	1.14	4.30	0.64	$p < .001$
18.	2.74	1.23	3.80	0.40	$p < .01$
19.	3.73	0.95	4.20	0.60	$p < .05$
21.	2.98	1.14	4.00	0.63	$p < .001$
23.	3.44	0.93	4.10	0.30	$p < .001$

and female principals in this category on item 3 (principal selects appropriate type of written communication), item 6 (principal seeks individual teachers' opinions), item 7 (principal seems interested in teachers' views), item 8 (principal attempts to understand rationale behind teachers' opinions), item 10 (principal gives complete attention to teachers), item 11 (principal seems relaxed when talking with teachers), item 12 (teachers feel relaxed when talking with principal), item 17 (principal explains reasons for decisions), item 18 (principal encourages less aggressive teachers), item 19 (appropriateness of verbal communication style), item 21 (principal encourages differing opinions), and item 23 (principal makes announcements at appropriate times). Without exception, the mean scores of teachers were significantly lower than the mean self-ascribed ratings of female principals. Table XXXIX summarizes findings in this category.

(I) Summary (Table XL).

(1) Teachers with male principals versus male principals.

A comparison of mean scores of total teachers having male principals with mean self-ascribed scores of total male principals yielded significant differences on eleven of the twenty items - specifically, on items 6, 7, 8, 9, 11, 15, 16, 17, 18, 19, and 21. In each case, the principals' mean self-ascribed score was significantly higher than the mean score assigned to principals by teachers. However, when such comparisons were made within the "more," "moderately," and "less" effective communicator categories, several additional significant differences were revealed. In the "more effective" category, there was only one significant difference found, a

TABLE XXXIX

Comparison of Teacher-assigned Ratings and Principals' Self-ascribed Ratings Regarding Principal Communication Activities: Teachers with Female Principals vs. Female Principals - "Less Effective" Communicators

Item #	Teachers (N=37)		Principals (N=5)		Significant Difference
	\bar{X}	S.D.	\bar{X}	S.D.	
1.	3.19	1.23	3.60	1.02	n.s.
2.	4.03	1.10	4.60	0.49	n.s.
3.	4.00	1.19	4.80	0.40	$p < .01$
5.	1.97	1.03	1.80	1.17	n.s.
6.	3.16	1.17	5.00	0.00	$p < .001$
7.	3.32	1.32	5.00	0.00	$p < .001$
8.	3.30	1.21	4.80	0.40	$p < .001$
9.	3.46	1.18	4.20	0.75	n.s.
10.	3.70	1.18	4.40	0.49	$p < .05$
11.	3.78	1.21	4.60	0.49	$p < .05$
12.	3.68	1.09	4.40	0.49	$p < .05$
13.	3.70	1.18	4.40	0.80	n.s.
14.	3.73	1.20	4.20	0.40	n.s.
15.	3.57	1.31	4.00	0.63	n.s.
16.	3.78	1.25	4.40	0.80	n.s.
17.	3.84	1.10	4.60	0.49	$p < .05$
18.	3.03	1.22	4.40	0.49	$p < .001$
19.	3.57	1.22	4.60	0.49	$p < .01$
21.	3.38	1.24	4.60	0.49	$p < .01$
23.	3.27	1.20	4.20	0.40	$p < .01$

TABLE XL

Summary of Significant Differences Found Between Teacher Assigned Mean Scores and the Principals' Self-Ascribed Mean Scores Regarding the Principals' Communication Activities: Variable of the Principals' Sex

Item #	Teachers w/Male Princ. Versus Male Princ.	Teachers w/Female Princ. Versus Female Princ.
1.		
2.	# _t < mp	
3.	t < mp	# _t < fp
5.		
6.	t < mp	t < fp
7.	t < mp	t < fp
8.	t < mp	t < fp
9.	t < mp	t < fp
10.	*t > mp and # _t < mp	# _t < fp
11.	t < mp	#t < fp
12.		#t < fp
13.	# _t < mp	
14.	+t > mp and # _t < mp	*t > fp
15.	t < mp	*t > fp
16.	t < mp	
17.	t < mp	# _t < fp
18.	t < mp	t < fp
19.	t < mp	# _t < fp
21.	t < mp	t < fp
23.	# _t < mp	*t > fp and # _t < fp

* denotes significant differences found only for principals rated as "more effective" communicators.

+ denotes significant differences found only for principals rated as "moderately effective" communicators.

denotes significant differences found only for principals rated as "less effective" communicators.

All other significant differences listed are for total male principals and for total female principals.

significant difference on item 10, and this difference was not found in the "total" findings listed above. Similarly, in the "moderately effective" category, there was only one significant difference, a significant difference on item 14. But, unlike the differences found between total teachers and total male principals, the mean self-ascribed score of male principals in each of these latter two categories was significantly lower than the mean score assigned by their respective teachers. In the "less effective" communicator category, significant differences were found on the same eleven items as were found in the "total" findings listed above, but significant differences also were found on items 2, 3, 10, 13, 14, and 23. Without exception, the mean self-ascribed score of male principals was significantly higher than the mean score assigned to those male principals by their respective teachers.

(2) Teachers having female principals versus female principals. A comparison of mean scores of total teachers having female principals with mean self-ascribed scores of total female principals revealed significant differences on six of the twenty items - specifically, on items 6, 7, 8, 9, 18, and 21. In each case, the principals' mean self-ascribed score was significantly higher than the mean score assigned to principals by teachers. However, when such comparisons were made within the "more," "moderately," and "less" effective communicator categories, several additional significant differences were revealed. In the "more effective" communicator category, there were significant differences on five items, two of which (items 6 and 7) also were found in the "total" findings listed previously, but three of which (items 14, 15, and 23) were

not. Unlike items 6 and 7, the additional three items (14, 15, and 23) revealed significant differences in which the principals' mean self-ascribed score was significantly lower than the mean score assigned by teachers. In the "less effective" communicator category, there were significant differences on twelve items, five of which also were found in the "total" findings (i.e. items 6, 7, 8, 18, and 21), but seven of which were not (i.e. items 3, 10, 11, 12, 17, 19, and 23). In each instance, as with the "total" findings, the principals' mean self-ascribed score was significantly higher than the mean score assigned by teachers.

(J) Conclusions. Significant differences found for all principals on the following opinionnaire items led to a rejection of the related sub-hypotheses:

(1) from item 6 (principal seeks individual teachers' opinions), a rejection of sub-hypothesis $AH_{OC}(5)$ ("There is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency with which principals seek the personal opinion of individual teachers on school matters");

(2) from item 7 (principal seems interested in teachers' views), a rejection of sub-hypothesis $AH_{OC}(6)$ ("There is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency with which principals seem genuinely interested in knowing individual teachers' views on major school issues");

(3) from item 8 (principal attempts to understand rationale behind teachers' opinions), a rejection of sub-hypothesis AH_{OC}

(7) ("There is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency with which principals attempt to understand the rationale behind individual teachers' opinions on major school issues");

(4) from item 9 (principal sought out by teachers), a rejection of sub-hypothesis $AH_{OC}(8)$ ("There is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency with which principals are sought out by individual teachers for discussion of school matters");

(5) from item 11 (principal seems relaxed when talking with teachers), a rejection of sub-hypothesis $AH_{OC}(10)$ ("There is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency with which principals seem relaxed when talking with individual teachers");

(6) from item 13 (effective exchange of information at staff meetings), a rejection of sub-hypothesis $AH_{OC}(12)$ ("There is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency with which principals effectively exchange information with their teachers at staff meetings");

(7) from item 15 (means what he/she says), a rejection for male principals of sub-hypothesis $AH_{OC}(14)$ ("There is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency with which principals mean exactly what they say");

(8) from item 16 (principal encourages teacher contribution to discussions), a rejection of sub-hypothesis $AH_{OC}(15)$ ("There

is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency with which principals encourage meaningful teacher contribution to staff meeting discussions");

(9) from item 17 (principal explains reasons for decisions), a rejection of sub-hypothesis $AH_{OC}(16)$ ("There is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency with which principals satisfactorily explain their reasons for making important decisions that directly affect their respective teachers");

(10) from item 18 (principal encourages less aggressive teachers), a rejection of sub-hypothesis $AH_{OC}(17)$ ("There is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency with which principals encourage less aggressive teachers to express their opinions on major issues");

(11) from item 19 (appropriateness of verbal communication style), a rejection of sub-hypothesis $AH_{OC}(18)$ ("There is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency with which principals use appropriately formal or informal verbal communication"); and

(12) from item 21 (principal encourages differing opinions), a rejection of sub-hypothesis $AH_{OC}(19)$ ("There is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency with which principals encourage teachers to express opinions which differ from their own").

Because there was a relatively small number of principals in the "more," "moderately," and "less" effective communicator categories, generalizations made on the basis of tests using these groupings must be made with caution. However, test results on this sample indicated a significant difference on the following opinionnaire items, which, in turn, pointed toward a rejection of the related sub-hypotheses:

(13) from item 2 (written communication is clearly stated), a rejection of sub-hypothesis $AH_{OC}(2)$ ("There is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency with which the principals' written communication to teachers is clearly stated");

(14) from item 3 (principal selects appropriate type of written communication), a rejection of sub-hypothesis $AH_{OC}(3)$ ("There is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency with which principals select appropriate types of written communication");

(15) from item 10 (principal gives complete attention to teachers), a rejection of sub-hypothesis $AH_{OC}(9)$ ("There is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency with which principals give complete attention to individual teachers who are speaking with them");

(16) from item 12 (teachers feel relaxed when talking with principal), a rejection of sub-hypothesis $AH_{OC}(11)$ ("There is no significant difference between the teacher-assigned rating and the

principals' self-ascribed rating regarding the frequency with which teachers feel relaxed when talking to their principal");

(17) from item 13 (effective exchange of information at staff meetings), a rejection of sub-hypothesis $AH_{OC}(12)$ ("There is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency with which principals effectively exchange information with their teachers at staff meetings");

(18) from item 14 (concise expression of ideas), a rejection of sub-hypothesis $AH_{OC}(13)$ ("There is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency with which principals express their ideas concisely at staff meetings"); and

(19) from item 23 (principal makes announcements at appropriate times), a rejection of sub-hypothesis $AH_{OC}(20)$ ("There is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency with which principals make important announcements at the most appropriate times").

3. Difference of means. To test for agreement of perceptions between teachers and principals, "disparity scores" were computed for every principal on each opinionnaire item. In each instance, the "disparity score" was derived by subtracting the mean score teachers assigned to their principal from the self-ascribed item score of the principal. Subsequently, the mean "disparity scores" of all male principals were compared to those of female

principals, using a two-tailed t test and the Welch T' adjustment. A minus (negative) "disparity score" would indicate that the mean score assigned by teachers was greater than the principals' self-ascribed mean score; a positive "disparity score" would indicate that the mean score assigned by teachers was less than the principals' self-ascribed mean score.

(A) Totals. As is shown in Table XLI, there was a significant difference on item 15 (principal means what he/she says), with the "disparity score" for total female principals being significantly lower than the "disparity score" for total male principals.

(B) "More effective" communicators. In this category there were significant differences on item 5 (principal receives written communication from teachers), item 10 (principal gives complete attention to teachers), and item 19 (appropriateness of verbal communication style). The "disparity score" for male principals was significantly greater than the "disparity score" for female principals on item 10, but was significantly lower than for female principals on item 5 and item 19. Table XLII contains a summary of findings in this category.

(C) "Moderately effective" communicators. As is shown in Table XLIII, there were only two female principals in this category - not enough to make generalizable comparisons between male and female principals - but results in this sample indicated a significant difference on item 5 (principal receives written communication from teachers), item 13 (effective exchange of information at staff meetings), item 18 (principal encourages less aggressive teachers), item 19 (appropriateness of verbal communication style),

TABLE XLI
 "Disparity Scores" - Totals

Item #	Male Princ. (N=29) \bar{X}	S.D.	Female Princ. (N=15) \bar{X}	S.D.	Significant Difference
1.	-0.08	1.16	0.03	1.02	n.s.
2.	-0.04	0.87	-0.04	0.91	n.s.
3.	0.09	0.87	0.20	0.98	n.s.
5.	0.13	1.08	0.16	1.13	n.s.
6.	1.06	0.89	1.00	0.82	n.s.
7.	0.99	0.93	0.90	0.74	n.s.
8.	0.74	0.84	0.72	0.74	n.s.
9.	0.58	0.81	0.50	0.56	n.s.
10.	0.04	0.67	0.25	0.66	n.s.
11.	0.26	0.56	0.24	0.62	n.s.
12.	0.03	0.55	0.16	0.56	n.s.
13.	0.20	0.72	0.24	0.66	n.s.
14.	-0.06	0.91	-0.06	0.68	n.s.
15.	0.32	0.78	-0.22	0.75	$p < .05$
16.	0.38	0.70	0.12	0.73	n.s.
17.	0.27	0.80	0.18	0.58	n.s.
18.	0.63	0.88	0.82	0.93	n.s.
19.	0.24	0.48	0.11	0.96	n.s.
21.	0.47	1.05	0.37	0.90	n.s.
23.	0.09	0.65	0.06	0.90	n.s.

TABLE XLII

"Disparity Scores" - "More Effective" Communicators

Item #	Male Princ. (N=7)		Female Princ. (N=8)		Significant Difference
	\bar{X}	S.D.	\bar{X}	S.D.	
1.	-0.99	1.00	-0.33	0.49	n.s.
2.	-0.95	0.82	-0.56	0.79	n.s.
3.	-0.51	1.12	-0.42	0.91	n.s.
5.	-0.25	0.95	0.67	0.74	$p < .05$
6.	0.31	1.17	0.49	0.57	n.s.
7.	0.32	0.65	0.46	0.41	n.s.
8.	0.18	0.69	0.20	0.48	n.s.
9.	0.04	0.62	0.26	0.45	n.s.
10.	-0.62	0.44	-0.05	0.76	$p < .05$
11.	0.11	0.52	-0.12	0.42	n.s.
12.	-0.26	0.61	-0.13	0.54	n.s.
13.	-0.09	0.61	-0.14	0.47	n.s.
14.	-0.49	0.71	-0.48	0.52	n.s.
15.	-0.33	0.49	-0.68	0.51	n.s.
16.	-0.02	0.45	-0.24	0.53	n.s.
17.	0.08	0.56	-0.21	0.46	n.s.
18.	0.16	1.02	0.23	0.77	n.s.
19.	0.10	0.41	-0.64	0.62	$p < .05$
21.	0.14	0.63	-0.32	0.53	n.s.
23.	-0.13	0.60	-0.65	0.54	n.s.

TABLE XLIII

"Disparity Scores" - "Moderately Effective" Communicators

Item #	Male Princ. (N=12)		Female Princ. (N=2)		Significant Difference
	\bar{X}	S.D.	\bar{X}	S.D.	
1.	-0.02	0.83	0.76	1.36	n.s.
2.	-0.10	0.61	-0.11	0.49	n.s.
3.	0.09	0.48	0.92	0.33	n.s.
5.	0.28	1.09	-1.09	0.09	$p < .01$
6.	1.21	0.61	1.02	0.42	n.s.
7.	0.87	0.88	0.79	0.39	n.s.
8.	0.58	0.70	0.96	0.36	n.s.
9.	0.75	0.48	0.96	0.16	n.s.
10.	0.09	0.44	0.35	0.15	n.s.
11.	0.16	0.42	0.31	0.31	n.s.
12.	0.07	0.45	0.31	0.31	n.s.
13.	-0.13	0.56	0.54	0.14	$p < .01$
14.	-0.44	0.54	0.24	0.64	n.s.
15.	0.49	0.53	-0.02	0.58	n.s.
16.	0.10	0.57	0.38	0.18	n.s.
17.	-0.03	0.86	0.47	0.27	n.s.
18.	0.59	0.81	1.99	0.19	$p < .001$
19.	0.15	0.47	0.81	0.01	$p < .001$
21.	0.23	1.27	0.93	0.13	n.s.
23.	-0.22	0.48	0.57	0.18	$p < .05$

and item 23 (principal makes announcements at appropriate times).

In all cases, the "disparity score" for female principals was greater than that of male principals.

(D) "Less effective" communicators. A significant difference was found on item 19 (appropriateness of verbal communication style), with the "disparity score" for female principals being significantly greater than that of male principals. Table XLIV has a summary of findings in this category.

(E) Summary and Conclusions. The difference of means tests were unlike other tests of Activity Hypotheses_{OC} ("There is no significant differences between the teacher-assigned ratings and the principals' self-ascribed ratings regarding principal communication activities"). All previous tests compared the ratings assigned to principals by teachers with the self-ascribed ratings of principals; in effect, then, teachers' perceptions were compared to principals' perceptions. With the difference of means tests, however, male principals' perceptions essentially were compared with female principals' perceptions. First, the teachers' mean scores were subtracted from the self-ascribed rating of their principal; the result was a "disparity score" for each principal on each opinionnaire item. Finally, the "disparity score" of male principals was compared to the "disparity score" of female principals on each opinionnaire item in an effort to determine whether or not male and female principals had a similar degree of perceptual agreement or disagreement with their respective teachers.

The "disparity score" for total male principals was significantly greater than it was for total female principals on item 15

TABLE XLIV

"Disparity Scores" - "Less Effective" Communicators

Item #	Male Princ. (N=10)		Female Princ. (N=5)		Significant Difference
	\bar{X}	S.D.	\bar{X}	S.D.	
1.	0.48	1.23	0.32	1.22	n.s.
2.	0.67	0.42	0.82	0.50	n.s.
3.	0.52	0.78	0.92	0.44	n.s.
5.	0.23	1.09	-0.15	1.34	n.s.
6.	1.39	0.61	1.80	0.60	n.s.
7.	1.61	0.74	1.66	0.66	n.s.
8.	1.31	0.73	1.46	0.47	n.s.
9.	0.76	1.04	0.70	0.63	n.s.
10.	0.44	0.70	0.71	0.16	n.s.
11.	0.47	0.67	0.79	0.57	n.s.
12.	0.19	0.52	0.58	0.35	n.s.
13.	0.79	0.56	0.71	0.67	n.s.
14.	0.69	0.92	0.48	0.40	n.s.
15.	0.57	0.94	0.43	0.59	n.s.
16.	0.98	0.57	0.60	0.83	n.s.
17.	0.76	0.60	0.69	0.32	n.s.
18.	1.00	0.68	1.31	0.53	n.s.
19.	0.44	0.47	1.05	0.40	p < .05
21.	0.99	0.77	1.24	0.57	n.s.
23.	0.60	0.54	1.00	0.41	n.s.

(principal means what he/she says). However, when male and female principals were grouped into "more," "moderately," and "less" effective communicator categories, the significant difference on item 15 did not appear again. Instead, a significant difference was found on item 5 (principal receives written communication from teachers) for both the "more" and the "moderately" effective groups, with the "disparity score" for female principals being significantly greater than it was for male principals; a significant difference was found on item 19 (appropriateness of verbal communication style) for all three communicator categories, with the "disparity score" for female principals being significantly greater than it was for male principals; significant differences were found on items 13 (effective exchange of information at staff meetings), 18 (principal encourages less aggressive teachers), and 23 (principal makes announcements at appropriate times) for principals in the "moderately effective" category, with the "disparity score" for female principals being significantly greater than it was for male principals; and a significant difference was found on item 10 (principal gives complete attention to teachers) for principals in the "more effective" communicator category, with the "disparity score" for female principals being significantly smaller than it was for male principals.

The significant differences found on items 5, 10, 13, 18, 19, and 23 (when the principals' scores were grouped according to the three communicator effectiveness categories) may have been obscured when the principals' scores were considered collectively - large variations in small groups may become small variations in

large groups. By the same token, the significant difference found between total male and total female principals on item 15 may not have shown up again in any of the three subgroups ("more, "moderately," and "less" effective communicators) because, broken down into relatively small groups, the variation in scores may not have assumed statistically significant dimensions.

"Disparity scores" on each of the opinionnaire items for total male and total female principals indicated substantial agreement in the perceptions or misperceptions of male and female principals with the perceptions of their respective teachers. However, when the principals were grouped according to the three communicator categories, female principals in the "moderately effective" group had significantly different "disparity scores" than male principals in that group on five different items (i.e. on items 5, 13, 18, 19, and 23). It must be remembered, though, that there were only two female principals in the "moderately effective" category, so these findings may not be generalizable; the same test would need to be made on another, larger sample before generalizations could be made with reasonable certainty.

4. Public address system. Fifteen male and six female principals were in schools equipped with a public address system. Item 24 ("The principal uses the P. A. system to communicate with teachers"), item 25 ("The principal uses the P. A. system at appropriate times during the school day"), and item 26 ("The principal's announcements over the P. A. system are clearly expressed") on the opinionnaire pertained to the principal's use of that system. A

comparison of mean scores on those three items revealed no significant differences between the following groups: a) teachers of principals in schools with a public address system versus those principals, b) teachers with male principals versus teachers with female principals, and c) male principals versus female principals.

III. Summary

Statistical tests performed on the data yielded results which led to the following conclusions.

The Effectiveness Hypotheses: There is no significant difference in the communication effectiveness of male and female elementary school principals.

- 1) EH_{OA} : There is no significant difference in the communication effectiveness of male and female elementary school principals, as perceived and rated by teachers.

Accepted

- 2) EH_{OB} : There is no significant difference in the communication effectiveness of male and female elementary school principals, as revealed by the self-ascribed ratings of principals.

Accepted

- 3) EH_{OC} : There is no significant difference between the teacher-assigned ratings and the principals' self-ascribed ratings regarding principal communication effectiveness.

TABLE XLV

Public Address System

Item #	Group	N	\bar{X}	S.D.	Sig. Diff.
24.	1) Teachers	211	2.84	1.31	n.s.
	2) Principals	15	2.52	1.21	
25.	1) Teachers	211	3.82	1.22	n.s.
	2) Principals	15	4.00	1.18	
26.	1) Teachers	211	4.02	1.06	n.s.
	2) Principals	15	4.00	1.14	
24.	1) Tchrs. with Male Princ.	148	3.02	1.03	n.s.
	2) Tchrs. with Female Princ.	63	2.28	1.04	
25.	1) Tchrs. with Male Princ.	148	3.81	0.88	n.s.
	2) Tchrs. with Female Princ.	63	4.04	1.00	
26.	1) Tchrs. with Male Princ.	148	3.90	0.75	n.s.
	2) Tchrs. with Female Princ.	63	4.31	0.71	
24.	1) Male Princ.	15	2.53	1.10	n.s.
	2) Female Princ.	6	2.50	1.00	
25.	1) Male Princ.	15	4.20	0.53	n.s.
	2) Female Princ.	6	4.00	1.00	
26.	1) Male Princ.	15	4.14	0.60	n.s.
	2) Female Princ.	6	4.33	0.67	

Rejected for this sample, on the basis of significant differences found between teachers and principals in the "more" and "less" effective communicator categories. It would be unwise to generalize from these findings because there were a relatively small number of principals in these categories.

The Activity Hypotheses: There is no significant difference in the communication activities of male and female elementary school principals.

As a result of ambiguities associated with the term "communication activities" (see pages 42-43), the validity of sub-statements AH_{OA} , AH_{OB} , and AH_{OC} could not be tested directly. Consequently, only the sub-hypotheses for each of those three sub-statements were tested.

- 1) AH_{OA} : There is no significant difference in the communication activities of male and female elementary school principals, as perceived and rated by teachers.

As perceived and rated by teachers, there is no significant difference between male and female elementary school principals in the frequency:

$AH_{OA}(1)$: of their written communication with teachers.

Accepted

$AH_{OA}(2)$: with which their written communication to teachers is clearly stated.

Rejected for this sample, on the basis of the significant difference found between scores in the "more effec-

tive" communicator category. It would be unwise to generalize from this finding because there were a relatively small number of male and female principals in this category.

AH_{OA}(3): with which they select appropriate types of written communication.

Rejected for this sample, on the basis of the significant difference found between scores in the "more effective" communicator category. It would be unwise to generalize from this finding because there were a relatively small number of principals in this category.

AH_{OA}(4): with which they receive written communication from teachers.

Rejected on the basis of the significant differences found for all principals.

AH_{OA}(5): with which they seek the personal opinion of individual teachers on school matters.

Accepted

AH_{OA}(6): with which they seem genuinely interested in knowing individual teachers' views on major school issues.

Accepted

AH_{OA}(7): with which they attempt to understand the rationale behind individual teachers' opinions on major school issues.

Accepted

AH_{OA}(8): with which they are sought out by individual teachers for discussion of school matters.

Accepted

AH_{OA}(9): with which they give complete attention to individual teachers who are speaking with them.

Accepted

AH_{OA}(10): with which they seem relaxed when talking with individual teachers.

Accepted

AH_{OA}(11): with which their teachers feel relaxed when talking to them.

Accepted

AH_{OA}(12): with which they effectively exchange information with their teachers at staff meetings.

Accepted

AH_{OA}(13): with which they express their ideas concisely at staff meetings.

Accepted

AH_{OA}(14): with which they mean exactly what they say.

Accepted

AH_{OA}(15): with which they encourage meaningful teacher contribution to staff meeting discussions.

Accepted

AH_{OA}(16): with which they satisfactorily explain their reasons for making important decisions that directly affect their respective teachers.

Accepted

AH_{OA}(17): with which they encourage less aggressive teachers to express their opinions on major issues.

Accepted

AH_{OA}(18): with which they use appropriately formal or informal verbal communication.

Accepted

AH_{OA}(19): with which they encourage teachers to express opinions which differ from their own.

Accepted

AH_{OA}(20): with which they make important announcements at the most appropriate times.

Accepted

2) AH_{OB}: There is no significant difference in the communication activities of male and female elementary school principals, as revealed by the self-ascribed ratings of principals.

As revealed by the self-ascribed ratings of principals, there is no significant difference between male and female elementary school principals in the frequency:

AH_{OB}(1): of their written communication with teachers.

Accepted

AH_{OB}(2): with which their written communication to teachers is clearly stated.

Accepted

AH_{OB}(3): with which they select appropriate types of written communication.

Accepted

AH_{OB}(4): with which they receive written communication from teachers.

Accepted

AH_{OB}(5): with which they seek the personal opinion of individual teachers on school matters.

Accepted

AH_{OB}(6): with which they seem genuinely interested in knowing individual teachers' views on major school issues.

Accepted

AH_{OB}(7): with which they attempt to understand the rationale behind individual teachers' opinions on major school issues.

Accepted

AH_{OB}(8): with which they are sought out by individual teachers for discussion of school matters.

Accepted

AH_{OB}(9): with which they give complete attention to individual teachers who are speaking with them.

Accepted

AH_{OB}(10): with which they seem relaxed when talking with individual teachers.

Accepted

AH_{OB}(11): with which their teachers feel relaxed when talking to them.

Accepted

AH_{OB}(12): with which they effectively exchange information

with their teachers at staff meetings.

Rejected for this sample, on the basis of the significant difference found between scores in the "moderately effective" communicator category. It would be unwise to generalize from this finding because there were a relatively small number of principals in this category.

AH_{OB}(13): with which they express their ideas concisely at staff meetings.

Accepted

AH_{OB}(14): with which they mean exactly what they say.

Rejected on the basis of significant differences found for all principals.

AH_{OB}(15): with which they encourage meaningful teacher contribution to staff meeting discussions.

Accepted

AH_{OB}(16): with which they satisfactorily explain their reasons for making important decisions that directly affect their respective teachers.

Accepted

AH_{OB}(17): with which they encourage less aggressive teachers to express their opinions on major issues.

Accepted

AH_{OB}(18): with which they use appropriately formal or informal verbal communication.

Rejected for this sample, on the basis of the significant difference found between scores in the "more effec-

tive" communicator category. It would be unwise to generalize from this finding because there were a relatively small number of male and female principals in this category.

AH_{OB}(19): with which they encourage teachers to express opinions which differ from their own.

Accepted

AH_{OB}(20): with which they make important announcements at the most appropriate times.

Accepted

3) AH_{OC}: There is no significant difference between the teacher-assigned ratings and the principals' self-ascribed ratings regarding principal communication activities.

There is no significant difference between the teacher-assigned rating and the principals' self-ascribed rating regarding the frequency:

AH_{OC}(1): of the principals' written communication with their respective teachers.

Accepted

AH_{OC}(2): with which the principals' written communication to teachers is clearly stated.

Rejected for this sample, on the basis of the significant difference found between male principals in the "less effective" communicator category and their teachers. It would be unwise to generalize from this finding because there were relatively few male principals in this category.

AH_{OC}(3): with which principals select appropriate types of written communication.

Rejected for this sample, on the basis of the significant differences found between principals (both male and female) in the "less effective" communicator category and their respective teachers. It would be unwise to generalize from these findings because there were relatively few principals in this category.

AH_{OC}(4): with which principals receive written communication from their teachers.

Accepted

AH_{OC}(5): with which principals seek the personal opinion of individual teachers on school matters.

Rejected on the basis of the significant differences found for all principals.

AH_{OC}(6): with which principals seem genuinely interested in knowing individual teachers' views on major school issues.

Rejected on the basis of the significant differences found for all principals.

AH_{OC}(7): with which principals attempt to understand the rationale behind individual teachers' opinions on major school issues.

Rejected on the basis of the significant differences found for all principals.

AH_{OC}(8): with which principals are sought out by individual teachers for discussion of school matters.

Rejected on the basis of the significant differences found for all principals.

AH_{OC}(9): with which principals give complete attention to individual teachers who are speaking with them.

Rejected for this sample, on the basis of significant differences found between male principals in the "more effective" communicator category and their teachers, and between principals (both male and female) in the "less effective" communicator category and their respective teachers. It would be unwise to generalize from these findings because there were relatively few principals in these categories.

AH_{OC}(10): with which principals seem relaxed when talking with individual teachers.

Rejected for all principals on the basis of the significant difference found between total teachers and total principals, and rejected in this sample for female principals in the "less effective" communicator category. It would be unwise to generalize from the latter finding because there were relatively few female principals in that category.

AH_{OC}(11): with which teachers feel relaxed when talking to their principal.

Rejected for this sample, on the basis of the significant difference found between female principals in the "less effective" communicator category and their teachers. It would be unwise to generalize from this finding because there were relatively few female principals in this category.

AH_{OC}(12): with which principals effectively exchange information with their teachers at staff meetings.

Rejected on the basis of the significant difference found between all principals and all teachers; rejected for this sample, on the basis of the significant difference found between male principals in the "less effective" communicator category and their teachers. It would be unwise to generalize from the latter finding because there were relatively few male principals in this category.

AH_{OC}(13): with which principals express their ideas concisely at staff meetings.

Rejected for this sample, on the basis of significant differences between female principals in the "more effective" communicator category and their teachers, between male principals in the "moderately effective" category and their teachers, and between male principals in the "less effective" communicator category and their teachers. It would be unwise to generalize from these findings because there were relatively few principals in these cate-

gories.

AH_{OC}(14): with which principals mean exactly what they say.

Rejected on the basis of significant differences found for all male elementary school principals; rejected for this sample, on the basis of significant differences found between female principals in the "more effective" communicator category and their teachers, between male principals in the "moderately effective" communicator category and their teachers, and between male principals in the "less effective" category and their teachers.

AH_{OC}(15): with which principals encourage meaningful teacher contribution to staff meeting discussions.

Rejected on the basis of significant differences found for all principals, and rejected for this sample on the basis of the significant difference found between male principals in the "less effective" communicator category and their teachers.

AH_{OC}(16): with which principals satisfactorily explain their reasons for making important decisions that directly affect their respective teachers.

Rejected on the basis of significant differences found for all principals, and rejected for this sample on the basis of significant differences found between principals (both male and female) in the "less effective" communicator category and their respective teachers.

AH_{OC}(17): with which principals encourage less aggressive teachers to express their opinions on major issues.

Rejected on the basis of significant differences found for all principals.

AH_{OC}(18): with which principals use appropriately formal or informal verbal communication.

Rejected on the basis of significant differences found for all principals, and rejected for this sample on the basis of the significant differences found between principals (both male and female) in the "less effective" communicator category and their respective teachers.

AH_{OC}(19): with which principals encourage teachers to express opinions which differ from their own.

Rejected on the basis of significant differences found for all principals.

AH_{OC}(20): with which principals make important announcements at the most appropriate times.

Rejected for this sample, on the basis of significant differences found between female principals in the "more effective" communicator category and their teachers, and between principals (both male and female) in the "less effective" communicator category and their respective teachers.

Chapter V

Additional Comments from Respondents

Introduction

Of the forty-four principals in the sample, sixteen wrote statements at the end of the questionnaire, explaining their own style of communication or airing their views concerning communication problems. Teacher-participants representing twenty-seven of the forty-four schools also added statements, either giving reasons for their ratings or making some value judgment on their principal's communication skills. Summaries of the comments will be presented in three sections: a) statements made by or about principals rated as "more effective" communicators, b) statements made by or about principals rated as "moderately effective" communicators, and c) statements made by or about principals rated as "less effective" communicators. In all instances, teacher comments were classified as being positive or negative before the teachers' principals had been grouped into the three communicator categories (refer to chapter III, pages 53-54, and chapter IV, pages 69-71 for information concerning the communicator categories).

Schools with Principals Rated as "More Effective" Communicators

1. Principals' comments. Four principals in this category responded, two male and two female principals. One male principal stated he tried to use a genuine, personal approach in com-

municating, and the other expressed his opinion that although one tried to be a good administrator, staff members may view the administrator as falling short of that goal; it would be interesting, the second male principal continued, to see how staff responses to the questionnaire items differed from those of administrators.

The first female principal indicated that this was her first year as a principal, and she felt she was just beginning to receive feedback (verbal and non-verbal) from her teachers regarding her communication skills. The other female principal said she had a small staff, so communication was always oral and decisions were made by the group.

2. Teachers' positive comments. Teachers from eleven different schools made comments; five schools in this group had male principals and six schools had female principals. Most frequently, principals in this category were viewed as being approachable, warm, understanding, and humane. Very often the only additional comment was "excellent!" Other important characteristics listed were the principal's relaxed manner, democratic orientation to decision-making, and ability to listen and be open to views which differed from his/her own. Also mentioned were the principal's knowledge base (understanding of problems faced by teachers in different grades), willingness to explain the rationale for decisions, clear and precise written communications, and open communication with students.

3. Teachers' negative comments. There were no such comments.

4. Miscellaneous comments by teachers. Two respondents remarked that a small school size and lack of any real dissent on major school issues facilitated effective communication.

Table XLVI provides a summary of comments made by teachers with principals rated as "more effective" communicators.

Schools with Principals Rated as "Moderately Effective" Communicators

1. Principals' comments. Five male and two female principals in this category volunteered statements. Four of the male principals said they used staff committees to solicit opinions and suggestions from teachers on school matters; they also mentioned that pressures of time caused staff meetings to be more information and direction giving than discussion producing. One principal said he used a weekly school bulletin for announcements of activities and general information; another felt his communication skills were enhanced by a receptive and supportive staff; and a third principal said his door was always open to teachers who wanted to talk to him. One of the principals indicated he was trying a collegial model of administration, but not all of his staff accepted the idea of their principal taking responsibility for decisions the entire group made; "democracy and majority rule," he concluded, "are not always accepted as an adequate method for decision-making."

The first female principal said she believed collegiality works, and she regarded her role as one of "initiation and motiva-

TABLE XLVI

Comments Made by Teachers with Principals Rated as
"More Effective" Communicators

Comments about the Principal	Times Stated by Teachers (N=24) with Male Principals	Times Stated by Teachers (N=13) with Female Principals	Total
POSITIVE:			
1. Humane, Approachable, Understanding	12	6	18
2. Excellent!	9	5	14
3. Relaxed Manner	5	5	10
4. Democratic	2	3	5
5. Open to Different Points of View	4	2	6
6. Ability to Listen	3	1	4
7. Written Communication is Clearly Stated	2	0	2
8. Good Knowledge Base	0	1	1
9. Explains Rationale for Decisions	1	0	1
10. Problems are Handled Immediately	1	0	1
11. Open Communication with Students	1	0	1
NEGATIVE:			
None			

tion - holding the line only when action of teachers would contravene law or policy." The second female principal outlined various ways communication was carried out in her school: a) occasional noon meetings with small groups, b) meetings with total staff, c) oral reminders about important meetings, and d) a chart in the staff-room listing in-service meeting information.

2. Teachers' positive comments. Teachers from eight different schools in this category made comments; six schools had male principals and two had female principals. Most often, only value statements were volunteered, rating the principal's communication skills from "generally satisfactory" to "excellent". Mentioned frequently were the principal's ability to listen and to be open to views which differed from her/his own, as well as the principal's relaxed manner and good relationship with the staff. Other favorable comments described the principal as being democratic, approachable, and diplomatic. A few teachers also said their principal provided a rationale for making important decisions, had clearly written communication, and kept the staff alerted to things that affected them at a professional, district, or school level.

3. Teachers' negative comments. Teachers from five different schools wrote negative statements. All of these schools had male principals. Unfavorable opinions included descriptions of the principal as being unapproachable, authoritarian, too involved with details, and unable to listen. Some felt their principal lacked feeling for and understanding of teachers' problems; some said he misused the public address system; and others complained that he

communicated indirectly through the vice principal too often.

4. Miscellaneous comments by teachers. Several teachers said that their principal's intentions were good, but that he/she was over-worked and had no time to carry on continued, effective communication. Other comments were made in explanation of the principal's communication style: one principal used small groups to gain acceptance on issues; another principal generally used the public address system to communicate with students (not with teachers); and a third principal did not use the public address system at all, but circulated a written school bulletin instead.

Table XLVII provides a summary of comments made by teachers with principals rated as "moderately effective" communicators.

Schools with Principals Rated as "Less Effective" Communicators

1. Principals' comments. Three male and two female principals in this category responded. One male principal said he consulted the staff on all matters affecting the school, and that general accord was sought before policy changes were made. The second male principal simply indicated he didn't have a public address system in his school. The third male principal reflected that part of success in communicating depends on perceptions of the listener, which, in turn, often lead to misinterpretation. The first female principal said she used staff committees to review the school's needs and the second female principal simply commented that her small school and staff made communication easy.

TABLE XLVII

Comments Made by Teachers with Principals Rated as
"Moderately Effective" Communicators

Comments about the Principal	Times Stated by Teachers (N=31) with Male Principals	Times Stated by Teachers (N=7) with Female Principals	Total
POSITIVE:			
1. Approachable	3	0	3
2. Generally Satisfac- tory; excellent	7	2	9
3. Relaxed Manner	6	2	8
4. Democratic	1	2	3
5. Open to Different Points of View	5	2	7
6. Ability to Listen	2	1	3
7. Written Communication is Clearly Stated	1	0	1
8. Explains Rationale for Decisions	1	0	1
9. Diplomatic	1	0	1
10. Keeps Staff Advised of Events (Professional, District, School)	0	1	1
NEGATIVE:			
1. Not Approachable	3	0	3
2. Over-concern for Details	2	0	2
3. Poor Written Communi- cation	2	0	2
4. Authoritarian	2	0	2
5. Messages Relayed from Vice Principal	2	0	2
6. Poor Use of Public Address System	1	0	1

2. Teachers' positive comments. Teachers from eight different schools made comments; five schools had male principals and three had female principals. Most often, only a value statement was made, rating the principal's general communication skills from "usually effective" to "very good". Also mentioned favorably were good feedback from the principal, concise public address system announcements, prompt action by the principal on teachers' questions and problems, the principal's concern, sense of humor, and relaxed, informal manner.

3. Teachers' negative comments. Teachers from ten different schools made comments; eight schools had male principals and two had female principals. Most often mentioned with disfavor was the principal's lack of visibility; even when invited to visit the classroom, one teacher complained, the principal did not appear. Other frequently mentioned factors were over-use of written memos as a means of communication, seeming disinterest in students, inability to listen, lack of openness to opinions which differed from those of the principal, and seeming enjoyment of confrontation. Inconsistent, authoritarian, emotional, opinionated, and weak in stating a position were other descriptive labels used by teachers. Also listed several times was the principal's over-concern for details, which, in turn, caused staff meetings to drag on too long and/or caused the principal to become bogged down by duties which the secretary should be doing.

Table XLVIII summarizes comments made by teachers with principals rated as "less effective" communicators.

TABLE XLVIII

Comments Made by Teachers with Principals Rated as
"Less Effective" Communicators

Comments about the Principal	Times Stated by Teachers (N=29) with Male Principals	Times Stated by Teachers (N=15) with Female Principals	Total
POSITIVE:			
1. Generally Effective; Very Good	6	2	8
2. Relaxed Manner	2	0	2
3. Teachers' Problems Promptly Taken Care of	0	1	1
4. Public Address System Announcements are Concise	0	1	1
NEGATIVE:			
1. Not Visible	5	5	10
2. Not Open to Differing Opinions	6	2	8
3. Emotional	2	3	5
4. Over-concern with Details	7	0	7
5. Over-use of Written Memos	5	0	5
6. Seeming Lack of Interest in Students	6	0	6
7. Weak in Stating a Position	5	0	5
8. Not Concerned with Feedback to Teachers	2	0	2
9. Inconsistent	2	1	3
10. Inability to Listen	0	1	1
11. Inappropriate Timing of Announcements	1	0	1

Other Comments

Four teachers stated that they had not been in their present school long enough to properly evaluate the communication skills of their principal.

Conclusions

Of the teachers who wrote comments, teachers with principals who were rated as "more effective" communicators tended to emphasize the following characteristics as being important components of the principals' effective communication: a) approachability and understanding, b) relaxed manner, c) openness to different points of view, and d) democratic orientation to decision-making. Teachers with principals who were rated as "moderately effective" communicators most frequently identified the principals' relaxed manner and openness to different points of view as qualities related to the principals' effective communication; they most frequently identified "inapproachability" as a barrier to communication. And teachers with principals who were rated as "less effective" communicators failed to give a clear indication of which factors facilitated effective communication, but they most frequently identified the following characteristics as inhibiting communication: a) lack of visibility, b) lack of openness to differing opinions, c) over-concern with details, d) seeming lack of interest in students, e) over-use of written memos, f) weakness in stating a position, and g) exhibition of too much emotion.

On the basis of the teachers' specific comments, a few gen-

eral observations could be made. First, the varying number of comments made by teachers about principals in each of the three categories was not reflective of the quality of a principal's communication; it was simply reflective of the varying numbers of principals and teachers within each category. The proportion of teacher comments in each category was, generally speaking, roughly the same. Table XLIX provides a summary of these proportions.

A second general observation concerned the nature of the teachers' additional comments. As is revealed by Tables XLVI, XLVII, and XLVIII - and as is summarized in Table L - the number of positive comments decreased from the "more" to the "moderately" to the "less" effective communicator category, while the number of negative comments increased. Although it was not of itself conclusive evidence, this finding lended support to earlier positive indication (see chapter III, pages 53-54) that respondents had a similar interpretation of item 20 ("The principal communicates effectively"); thus that item could be used as a reasonable-indicator of a principal's relative communication effectiveness.

TABLE XLIX

Proportion of Teacher Comments

Group	Teachers w/Male Princ.		Teachers w/Female Princ.		Category Totals	
	# Tchr. Comments	Total Possible Prop.	# Tchr. Comments	Total Possible Prop.	Total Comments	Total Poss. Prop.
"More Effect." Communicators	24	47 1/1.96	13	57 1/4.38	37	104 1/2.81
"Moderately Effective" Communicators	31	110 1/3.55	7	21 1/3	38	131 1/3.45
"Less Effect." Communicators	29	90 1/3.10	15	37 1/2.47	44	127 1/2.89

TABLE L
Number of Teacher Comments

Group	Teachers w/Male Princ.		Teachers w/Female Princ.		Totals	
	Positive	Negative	Positive	Negative	Positive	Negative
"More Effect." Communicators	40	0	23	0	63	0
"Moderately Effective" Communicators	27	12	10	0	37	12
"Less Effect." Communicators	8	41	4	12	12	53

Chapter VI

Interpretation of Findings

Introduction

Test results cannot be understood properly in isolation. Sometimes statistically significant differences are the result of obscured contributing factors; sometimes not finding significant differences is unexpected. In this chapter, a brief discussion of some major findings is presented. Because not all test results can be explained from the available data, portions of the discussion will be speculative in nature.

Control for Non-Sex Related Variables

1. Teachers' responses.

(A) Age category. The significant difference found between teachers in the 20-30 age group and teachers in the 31-40 age group on questionnaire item 20 (principal communicates effectively) may be related to the significant difference between those same two groups on item 17 (principal explains reasons for decisions). The younger teachers are evidently less satisfied than the older ones with explanations their respective principals give for making important decisions (see Table XIV, page 90), and consequently the younger teachers are less satisfied with the principals' general communication effectiveness (see Table V, page 68). Perhaps discontentment arises from the enthusiasm new teachers often have for "getting involved" personally in school matters and in decision-

making processes, but that idea is hypothetical, and additional studies would be necessary to discover exactly why these two particular age groups rate principals significantly differently on items 17 and 20.

(B) School size. As might be expected, there was a significant difference between the mean scores teachers assigned to principals in small schools and the mean scores teachers assigned to principals in medium-sized schools on item 1 (frequency of written communication). The question is, why wasn't there also a significant difference in teacher ratings of principals in small schools and teacher ratings of principals in large schools? It might be expected that a principal of a large school would find it expedient to use written communication as a means of contacting teachers. However, this situation could be explained if large schools possess and utilize the alternative means of communication that many smaller schools do not have access to, the public address system.

Significant differences on items 6 (principal seeks individual teachers' opinions), 7 (principal seems interested in teachers' views), 8 (principal attempts to understand rationale behind teachers' opinions), 9 (principal sought out by teachers), 11 (principal seems relaxed when talking with teachers), 12 (teachers feel relaxed when talking with principal), 14 (concise expression of ideas), 15 (principal means what he/she says), and 16 (principal encourages teacher contribution to discussions) are most likely reflective of increasing constraints on the principals' time as the size of their schools increases. In each case, the mean frequency scores of teachers with principals in large schools was

lower than the mean scores of teachers with principals in medium-sized schools; the mean scores of teachers with principals in medium-sized schools was, in turn, lower than the mean scores of teachers with principals in small schools. Principals in larger schools would need to have substantially more time than their counterparts in smaller schools if all teachers were to be consulted at length, individually or collectively, concerning major school issues.

(C) Years at present school. The mean scores of teachers who had been at their present school from 3 to 5 years were significantly lower on items 14 (concise expression of ideas) and 15 (principal means what he/she says) than either the mean scores of teachers who had been at their present school from 1 to 2 years or the mean scores of teachers who had been at their school 6 years or more. These findings seem to point to a possible teacher slump of some sort during the 3 to 5 year time span. Further study would be needed to properly understand the situation.

2. Principals' responses to item 18 (principal encourages less aggressive teachers). The significant difference in the mean self-ascribed rating of principals in large schools and that of principals in medium-sized schools on item 18 may again be a result of differences in time constraints. Unexpected is the lack of significant difference in mean scores of principals in small schools with principals in either medium-sized or large schools (Table XXV, page 116). Presumably there is more informal contact between teachers and principals of small schools, so status and authority

barriers may not intimidate teachers who would otherwise be "less aggressive" in expressing their opinions on major issues. The concept of encouraging "less aggressive" teachers to express their opinions may not be particularly relevant in many small schools.

Differences Related to the Sex of the Principal

1. Teachers' ratings. Although not all differences are statistically significant, there appears to be a trend revealed by the over-all mean scores of teachers with male principals and the mean scores of teachers with female principals (see Table XVII, pages 97-98). Opinionnaire items 1, 2, 3, and 5 pertain to the area of written communication, and for each of those four items male principals received a higher mean rating from their teachers than female principals received from theirs. However, a higher mean rating on these four items is not necessarily indicative of better skills in written communication. It should be remembered that a) items 1 (frequency of written communication) and 5 (principal receives written communication from teachers) did not correlate significantly with item 20 (principal communicates effectively), and b) teachers with principals who were "less effective" communicators complained that their respective principals over-used memos as a means of communication. Some situations simply are not appropriate for using written communication very often, and smaller schools would likely find written communication less frequently appropriate to its needs than larger schools would. Since seven of the fifteen (46.6 per cent) female principals were

in schools with eight or fewer teachers, in contrast to six of the twenty-nine (20.6 per cent) male principals who were in such schools, frequent use of written communication may not be appropriate for 46.6 per cent of the female principals in this sample. This circumstance may account for the lower mean score for female principals on opinionnaire items relating to the use of written communication.

On items 6 through 23 (excluding item 22 which was dropped from the study), however, female principals received higher mean ratings from their teachers than male principals received from their teachers (Table XVII, pages 97-98). It would seem, then, that in comparison to male principals, female principals were perceived by teachers as being more frequently effective in oral communication on a one-to-one basis, more frequently effective in oral communication at staff meetings, and more frequently effective in general style of communication. However, school size could contribute to this situation, and thirteen of the twenty-nine (44.8 per cent) male principals were in schools with fifteen or more teachers, in contrast to three of the fifteen (20 per cent) female principals who were in similar sized schools.

2. Principals' ratings. In agreement with the teachers' ratings, female principals perceived themselves as encouraging teachers to express differing opinions significantly more often than male principals perceived themselves. The agreement of perceptions between teachers with female principals and those female principals would seem to indicate that female principals may indeed

be more receptive than male principals to conflicting views. Such an indication causes one to wonder if female principals are more objective about - less ego-involved with - school issues? And does the openness of female principals to other opinions have implications for the sort of decision-making process they use? Is it a reason why, for example, Wiles and Grobman (1955) found women to be more democratic principals than men?

Female principals in this sample also perceived themselves as saying exactly what they mean (item 15) significantly less often than male principals perceived themselves as doing. Does this finding indicate female principals tend to view themselves as devious or diplomatic? Or, perhaps, are they being realistic? In light of other studies which found female administrators to be more considerate than their male counterparts (Roussell, 1974:216) and better in maintaining organizational relationships (Meskin, 1974:2), it may be the case that female principals perceive themselves as being "tactful" by not saying precisely what they mean on some occasions. It is also important to note that teachers with female principals rated as "more effective" communicators scored the principals significantly higher than these female principals rated themselves on item 15; it would appear that teachers perceived those principals as being sincere, and not particularly devious.

3. Difference of means. Over-all tests on differences of means showed no significant differences in the "disparity scores" of male and female principals. Male principals appeared to have

roughly the same degree of agreement or disagreement in perceptions with their teachers as female principals had with theirs.

"More Effective" and "Less Effective" Communicator Groups

One interesting trend was noted in the test results of participants in the "more effective" communicator group compared with the test results of participants in the "less effective" communicator group. Mean scores of teachers with principals rated as "less effective" communicators were significantly lower than the mean self-ascribed scores of those principals on almost every item, indicating that, in comparison to their teachers' perceptions, "less effective" principals consistently over-estimated the frequency with which they engaged in various communication activities. "More effective" principals also had significantly different perceptions than their teachers on several items, but in their case, the principals' mean scores generally were lower than the mean scores of their teachers. In other words, "less effective" principals seemed to presume too much, while "more effective" principals seemed to underrate themselves as effective communicators. However, because there were relatively few principals in these two categories, generalizations must be made with caution.

Conclusions

This study found no significant differences in the perceived communication effectiveness of male and female principals, either as reflected by teachers' mean scores or by principals'

mean self-ascribed ratings. It did suggest communication activities of male and female principals may have been influenced to some extent by school size. However, one main difference in communication activities seemed to be independent of school size and dependent on the principals' sex: female principals were perceived as encouraging teachers to express differing opinions significantly more often than male principals.

There are several implications that one could draw from these results. First, under general circumstances, there should be no biases in favor of hiring men or in favor of hiring women for principalship positions on the basis of their communication activities and effectiveness. Second, if for whatever reason, a school board needs to hire a principal who encourages the expression of differing views among teachers in a given school, then - all other things being equal - the chances are statistically better that a female will satisfy that need. For example, if teacher morale were poor because teachers felt the previous principal had been too authoritarian and had ignored their views, then this study's findings suggest the chances are better that a female principal, as opposed to a male principal, would be able to relieve the situation, since female principals are perceived as encouraging differing views significantly more often than are male principals. And third, if for whatever reason, a board needs to hire a principal who is less likely to encourage teachers to express their (differing) opinions, then - all other things being equal - the chances are statistically better that a male will satisfy that need. For example, if a school had been disrupted by constant, prolonged

debate over school issues, then this study's findings suggest the chances are better that a male principal, as opposed to a female principal, would be able to relieve the situation, since male principals are perceived as encouraging differing views significantly less often than are female principals.

Chapter VII

Summary and Suggestions for Further Research

Summary

1. The problem. The focal point of this study was a comparison of the communication activities and effectiveness of male and female principals, as perceived by teachers and as perceived by the principals themselves. The study attempted to discover whether or not female principals were perceived as: a) being equally effective communicators as male principals, and/or b) using similar communication activities as male principals.

2. A major limitation. This study was restricted somewhat by the small number of female principals in the sample, a condition which could be attributed in part to the extended nation wide postal strike and attributed to a larger degree to the small population of female principals in British Columbia. As a direct result of this restriction, a pilot test was not undertaken in the target population and some collapsing of variable subgroups was necessary. Generalizations based on the test results must be made with caution.

3. The hypotheses. There were two major groups of hypotheses, the Effectiveness Hypotheses and the Activity Hypotheses. The Effectiveness Hypotheses ("There is no significant difference in the communication effectiveness of male and female elementary school principals") were composed of three sub-hypotheses to avoid

problems with ambiguity of measurement:

EH_{OA} : There is no significant difference in the communication effectiveness of male and female elementary school principals, as perceived and rated by teachers.

EH_{OB} : There is no significant difference in the communication effectiveness of male and female elementary school principals, as revealed by the self-ascribed ratings of principals.

EH_{OC} : There is no significant difference between the teacher-assigned ratings and the principals' self-ascribed ratings regarding principal communication effectiveness.

Similarly, to avoid problems with ambiguity of measurement, the Activity Hypotheses ("There is no significant difference in the communication activities of male and female elementary school principals") contained three sub-statements, designated below as AH_{OA} , AH_{OB} , and AH_{OC} . To avoid ambiguity in the nature of "communication activities," a number of specific sub-hypotheses were developed for each of the three sub-statements:

1) AH_{OA} : There is no significant difference in the communication activities of male and female elementary school principals, as perceived and rated by teachers.

Refer to pages 43-45 for the specific sub-hypotheses listed under sub-statement AH_{OA} .

2) AH_{OB} : There is no significant difference in the communication activities of male and female elementary school principals, as revealed by the self-ascribed ratings of principals.

Refer to pages 45-47 for the specific sub-hypotheses listed under sub-statement AH_{OB} .

- 3) AH_{OC} : There is no significant difference between the teacher-assigned ratings and the principals' self-ascribed ratings regarding principal communication activities.

Refer to pages 47-49 for the specific sub-hypotheses listed under sub-statement AH_{OC} .

4. The general findings. No significant difference was found in the general communication effectiveness of male and female principals, either as perceived by teachers or as perceived by the principals themselves (Tables VII, VIII, and IX).

School size may have influenced most of the significant differences found in the teacher-assigned mean scores regarding the communication activities of male and female principals (Table XIX). But two items seemed related only to the variable of the principals' sex, item 5 (principal receives written communication from teachers) and item 21 (principal encourages differing opinions). The mean score of teachers with male principals was significantly higher than that of teachers with female principals on item 5; it was significantly lower than the mean score of teachers with female principals on item 21.

In general, the teacher-assigned communication effectiveness scores for all principals - based on item 20 ("The principal communicates effectively") - was high; the mean rating of the total teachers was 4.06, on a 1 to 5 point scale. Thus, the difference between "more effective" communicators and "less effective" communicators was not great; a span from 3.86 to 4.5 on mean scores

separated the two groups. Even so, there were interesting differences between those two groups. First, there were more significant differences between the perceptions of teachers and principals in the "less effective" communicator category than there were between teachers and principals in the "more effective" category. Second, where there were significant differences, teachers with principals in the "less effective" category assigned lower scores to their principals than those principals assigned to themselves, but the teachers with principals in the "more effective" category generally rated their principals higher than those principals rated themselves (Table XL). Third, teachers with principals in the "more effective" communicator category wrote only positive comments about their principals, whereas teachers with principals in the "less effective" communicator category wrote more negative than positive comments (Table L).

Over-all, one of the most interesting findings was unrelated to differences found between perceptions of teachers with male principals and perceptions of teachers with female principals, nor was it related to differences found between perceptions of male and female principals. Of interest was the disparity between perceptions of total teachers and perceptions of total principals. For eleven of the twenty-four items (omitting items 4 and 22 from the original 26 items on the opinionnaire), the teacher-assigned mean scores were found to be significantly lower than the mean self-ascribed scores of principals (Table XXXI).

Suggestions for Further Research

A study of this same nature could be carried out with a larger sample so that more pairs of variables could be tested. For example, are there significant differences in the perceived communication effectiveness of male principals in large schools and female principals in large schools?

In light of the significant difference found on item 21 (principal encourages differing opinions), it would be interesting to find what relationship may exist between communication style and style of decision-making. Are principals who encourage teachers to express differing opinions, for example, more democratic than principals who do not encourage such expression?

A study similar to this one could be considered for high schools, where increased departmentalization of teachers might complicate the communication process. Unfortunately, the population of female principals at the high school level may be even more severely restricted than it is at the elementary level, as is indicated by the fact that there was only one female principal at the 8-10 level and none in schools with higher grade combinations in British Columbia during the 1975-1976 school year ("List of Schools . . .," 1975-1976). If the situation in British Columbia is at all indicative of other provinces in Canada, it may not yet be feasible to conduct such a study at the high school level.

Certainly more research is needed concerning women in educational administration, especially research in the area of actual job performance.

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Appendix A

- 1) The Principals' Questionnaire, pages 204-207
- 2) The Teachers' Questionnaire, pages 208-211

School code: ____ (entered
by researcher)

Please respond to the following items:

1. Age category:

20-30 ____

41-50 ____

31-40 ____

above 50 ____

2. Sex:

male ____

female ____

3. Marital status:

single ____ married ____ divorced/widowed ____

4. Years of administrative experience (include present year): ____

5. Number of years you have been principal at this school (include present year): ____

6. Years academic and/or professional education beyond senior matriculation:

____ a) one to three years

____ b) BEd or equivalent

____ c) MEd or equivalent

____ d) additional beyond Master's degree

7. Number of full-time teachers in your school: ____

8. To whom may the researcher send teacher-questionnaires for distribution in your school?

name:

address (if other than school address):

Directions: Please circle one of the five numbers after each statement to indicate your opinion. If you do not find the exact response that fits your situation, please circle the one that you believe comes closest to it.

VERY SELDOM
SELDOM
OCCASIONALLY
OFTEN
VERY OFTEN

Written Communication

- | | | | | | |
|--|---|---|---|---|---|
| 1. You send written communication to the teachers. | 1 | 2 | 3 | 4 | 5 |
| 2. Your written communications to the teachers are clearly stated. | 1 | 2 | 3 | 4 | 5 |
| 3. You select the type of written communication (memo, letter, etc.) which is most appropriate for each situation. | 1 | 2 | 3 | 4 | 5 |
| 4. You give the teachers only essential information. | 1 | 2 | 3 | 4 | 5 |
| 5. You receive written communication from teachers. | 1 | 2 | 3 | 4 | 5 |

Oral Communication: One-To-One Basis

- | | | | | | |
|--|---|---|---|---|---|
| 6. You seek the personal opinion of individual teachers on school matters. | 1 | 2 | 3 | 4 | 5 |
| 7. You are genuinely interested in knowing teachers' views on major school issues. | 1 | 2 | 3 | 4 | 5 |
| 8. You attempt to understand the rationale behind the opinions held by individual teachers on major school issues. | 1 | 2 | 3 | 4 | 5 |
| 9. Teachers seek you out for discussion of school matters. | 1 | 2 | 3 | 4 | 5 |
| 10. Individual teachers have your complete attention while they are talking to you. | 1 | 2 | 3 | 4 | 5 |

	VERY SELDOM	SELDOM	OCCASIONALLY	OFTEN	VERY OFTEN
11. You are relaxed when talking with teachers on a one-to-one basis.	1	2	3	4	5
12. Individual teachers seem relaxed when talking with you.	1	2	3	4	5

Oral Communication: Staff Meetings

13. Staff meetings are occasions when the teachers and you effectively exchange information.	1	2	3	4	5
14. You express your ideas concisely.	1	2	3	4	5
15. You mean exactly what you say.	1	2	3	4	5
16. You encourage meaningful teacher-contribution to staff meeting discussions.	1	2	3	4	5
17. You satisfactorily explain to the teachers your reasons for making important decisions that directly affect them.	1	2	3	4	5
18. You encourage less aggressive teachers to express their opinions on major school issues.	1	2	3	4	5

General Style of Communication

19. In communicating verbally, you adapt the degree of formality or informality to suit each situation.	1	2	3	4	5
20. You communicate effectively with the teachers.	1	2	3	4	5
21. You encourage teachers to express opinions which may differ from yours.	1	2	3	4	5
22. You communicate with teachers in a formal manner.	1	2	3	4	5

	VERY SELDOM	SELDOM	OCCASIONALLY	OFTEN	VERY OFTEN
23. You make important announcements at the most appropriate times.	1	2	3	4	5

Public Address System (where applicable)

24. You use the P. A. system to communicate with teachers.	1	2	3	4	5
25. You use the P. A. system at appropriate times during the school day.	1	2	3	4	5
26. Your announcements over the P. A. system are clearly expressed.	1	2	3	4	5

Additional comments concerning your communication skills:

School code: ____ (entered by
researcher)

Please respond to the following items:

1. Age category:

20-30 ____

41-50 ____

31-40 ____

above 50 ____

2. Sex:

male ____

female ____

3. Marital status:

single ____ married ____ divorced/widowed ____

4. Years of teaching experience (include this year): ____

5. Number of years taught at this school (include this year): ____

6. Years academic and/or professional education beyond senior matriculation:

____ a) one to three years

____ b) BEd or equivalent

____ c) MEd or equivalent

____ d) additional beyond Master's degree

7. School size (by full-time teachers):

____ a) 1-4 teachers

____ d) 20-29 teachers

____ b) 5-9 teachers

____ e) 30-39 teachers

____ c) 10-19 teachers

____ f) 40 or more teachers

Directions: Please circle one of the five numbers after each statement to indicate your opinion. If you do not find the exact response that fits your situation, please circle the one that you believe comes closest to it.

VERY SELDOM
SELDOM
OCCASIONALLY
OFTEN
VERY OFTEN

Written Communication

- | | | | | | |
|---|---|---|---|---|---|
| 1. You receive written communication from the principal. | 1 | 2 | 3 | 4 | 5 |
| 2. Written communication from the principal is clearly stated. | 1 | 2 | 3 | 4 | 5 |
| 3. The principal selects the type of written communication (memo, letter, etc.) which is most appropriate for each situation. | 1 | 2 | 3 | 4 | 5 |
| 4. The principal gives the teachers only essential information. | 1 | 2 | 3 | 4 | 5 |
| 5. The principal receives written communication from you. | 1 | 2 | 3 | 4 | 5 |

Oral Communication: One-To-One Basis

- | | | | | | |
|--|---|---|---|---|---|
| 6. The principal seeks your personal opinion on school matters. | 1 | 2 | 3 | 4 | 5 |
| 7. The principal seems genuinely interested in knowing your views on major school issues. | 1 | 2 | 3 | 4 | 5 |
| 8. The principal attempts to understand the rationale behind your opinions on major school issues. | 1 | 2 | 3 | 4 | 5 |
| 9. You seek out the principal for discussion of school matters. | 1 | 2 | 3 | 4 | 5 |

	VERY SELDOM	SELDOM	OCCASIONALLY	OFTEN	VERY OFTEN
10. The principal gives complete attention to you while you are speaking with him.	1	2	3	4	5
11. The principal seems relaxed when talking with you.	1	2	3	4	5
12. You feel relaxed when talking with the principal.	1	2	3	4	5

Oral Communication: Staff Meetings

13. Teachers and principal effectively exchange information at staff meetings.	1	2	3	4	5
14. The principal expresses his ideas concisely at staff meetings.	1	2	3	4	5
15. The principal means exactly what he says.	1	2	3	4	5
16. The principal encourages meaningful teacher-contribution to staff meeting discussions.	1	2	3	4	5
17. The principal satisfactorily explains his reasons for making important decisions that directly affect teachers.	1	2	3	4	5
18. The principal encourages less aggressive teachers to express their opinions on major issues.	1	2	3	4	5

General Style of Communication

19. In communicating verbally, the principal adapts the degree of formality or informality to suit each situation.	1	2	3	4	5
20. The principal communicates effectively with the teachers.	1	2	3	4	5
21. The principal encourages teachers to express opinions which differ from his own.	1	2	3	4	5

	VERY SELDOM	SELDOM	OCCASIONALLY	OFTEN	VERY OFTEN
22. The principal communicates in a formal manner.	1	2	3	4	5
23. The principal makes important announcements at the most appropriate times.	1	2	3	4	5

Public Address System (where applicable)

24. The principal uses the P. A. system to communicate with teachers.	1	2	3	4	5
25. The principal uses the P. A. system at appropriate times during the school day.	1	2	3	4	5
26. The principal's announcements over the P. A. system are clearly expressed.	1	2	3	4	5

Additional comments concerning your principal's communication skills:

Appendix B

Correspondence

FACULTY OF EDUCATION
DEPARTMENT OF EDUCATIONAL
ADMINISTRATION



THE UNIVERSITY OF ALBERTA
EDMONTON, CANADA
T6G 2E1

September 5, 1975

Dear Respondent:

The study undertaken by Jaqueline Morgan is timely and useful. The research has a practical orientation in that it focuses upon communication in schools, specifically -- how principals see themselves to be communicating, and how teachers perceive the acts of communication of the principal.

The results should be of interest to teachers and administrators, as well as to those of us engaged in the preparation and inservice development of school administrators.

Your cooperation and assistance is much appreciated.

Sincerely,

John J. Bergen
Professor

JJB/dh

FACULTY OF EDUCATION
DEPARTMENT OF EDUCATIONAL
ADMINISTRATION



THE UNIVERSITY OF ALBERTA
EDMONTON, CANADA
T6G 2E1

16 September 1975

Dear

In conjunction with my thesis work for the University of Alberta's Department of Educational Administration, I am conducting a study on the perceived communication effectiveness of elementary school principals in British Columbia. I have enclosed copies of the two questionnaires which will be used in the study: the one on green paper is designed for elementary school principals' responses; the one on yellow paper is a mirror-image of the principals' questionnaire, and is designed for teachers' responses.

I cordially invite you to participate in this investigation. And, with your permission, I would like to ask your teachers to take part also. If you do agree to help me with this study, please respond to the items on the green questionnaire and return it to me in the envelope provided. Please be sure to answer items 7 and 8 on page one of your questionnaire.

Whatever you decide, thank-you for the time and consideration you give to my invitation to share in this investigation.

Sincerely,

Jacqueline Morgan
Graduate Student



16 September 1975

Dear Principal,

The enclosed questionnaire is being distributed to a randomly selected number of elementary school principals in British Columbia. Responses to the questionnaire will be used to complete an important part of my thesis at the University of Alberta on perceived communication effectiveness of elementary school principals. Further, results of this study may have some bearing on the future training of educational administrators.

The questions are designed to elicit your opinions concerning your own communication skills. Your responses will be grouped with those of other principals in the sample who have similar administrative experience and educational background. Thus, the focus of this study is on groups of principals with similar backgrounds; the focus is not on individual principals.

The questionnaire will be used for research purposes only, and your responses will be strictly confidential.

A summary of the study will be made available to any school or to any individual participant that desires such information. Requests should be made by contacting me at the address which is printed on the enclosed envelope.

I would appreciate your cooperation in completing and returning the questionnaire as soon as possible.

Thank you for participating.

Sincerely,

Jacqueline Morgan
Graduate Student

FACULTY OF EDUCATION
DEPARTMENT OF EDUCATIONAL
ADMINISTRATION



THE UNIVERSITY OF ALBERTA
EDMONTON, CANADA
T6G 2E1

16 September 1975

Dear Teacher,

The enclosed questionnaire is being distributed to all teachers in a randomly selected number of elementary schools in British Columbia. Responses to the questionnaire will be used to complete an important part of my thesis at the University of Alberta on perceived communication effectiveness of elementary school principals. Further, results of this study may have some bearing upon the future training of educational administrators.

The questions are designed to elicit your opinions on the communication skills of your principal. Your responses will be grouped with those of other teachers in the sample whose principal has similar administrative experience and educational background. Thus, the focus of this study is on groups of principals with similar backgrounds; the focus is not on individual principals.

The questionnaire will be used for research purposes only, and anonymity of individual responses is assured. Since I have no way of checking on the return of individual respondents, I would appreciate your cooperation in completing the questionnaire and returning it as soon as possible in the envelope provided.

A summary of the study will be made available to any school or to any individual participant that desires such information. Requests should be made by contacting me at the address which is printed on the return envelope.

Thank you for your time and consideration.

Sincerely,

Jacqueline Morgan
Graduate Student

30 September 1975

Dear

Your principal gave me permission to send you the enclosed questionnaires. Would you please distribute them to the full-time teachers of your school?

I appreciate your assistance with this project!

Sincerely,

Jacqueline Morgan
Graduate Student



9 October 1975

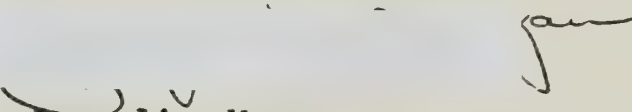
Dear Principal,

Two weeks ago, I sent you a questionnaire concerning perceived communication effectiveness. If you've intended to participate in this study, but simply have not had a chance to respond, may I urge you to do so as soon as possible? It's important that the data be gathered from principals and teachers before everyone becomes absorbed by pre-Christmas festivities.

If you are in a one-room school, and thus the questionnaire would not apply, I would appreciate your sending me a brief note to that effect.

Thank you for your help with this project!

Sincerely,


Jacqueline Morgan
Graduate Student

27 Linden Ave.
Victoria, B.C.
V8V 4C9

6 February 1976

Dear Principal,

A month ago, I sent you a questionnaire concerning perceived communication effectiveness. If you have intended to participate in this study, but simply have not had a chance to respond, may I urge you to do so as soon as possible?

If you have three or fewer full-time teachers, and thus the questionnaire would not really apply, I would appreciate your sending me a brief note to that effect.

Thank you for your help with this project!

Sincerely,

(Mrs.) Jacqueline Morgan
Graduate Student

27 Linden Ave.
Victoria, B.C.
V8V 4C9

9 January 1976

Dear

I realize the postal strike and the Christmas holidays have prevented some teachers from responding to my questionnaire as yet. Please tell them it is not too late for those who have not sent me their completed questionnaire to do so. I have enclosed several copies in case anyone's original has been lost in piles of exams, essays, or Christmas presents!

Many thanks for your assistance and best wishes in the New Year.

Sincerely,

(Mrs.) Jacqueline Morgan
Graduate Student

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